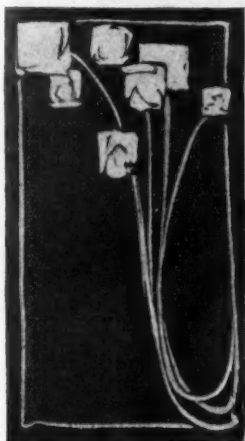


MOTOR AGE

SPEED TRAPS SET FOR NEW ENGLANDERS



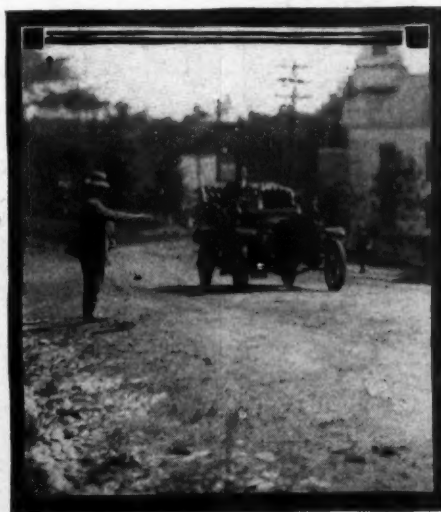
CAR ENTERING SPEED TRAP LOCATED AT NORTHBORO

WORCESTER, Mass., Sept. 1—Motorists throughout the city and surrounding towns with their officious country constables were had enough last year, but this season, in touring through this section, Worcester and its small neighbors have become bugbears to them. While Worcester motorists as a rule are practically unmolested and allowed to drive at almost any old rate of speed in the heart of the city, out-of-town owners are held up in the outskirts of the city by Worcester police in their trap and haled into court, Judge Samuel Utley's court. The motorists thus held up are principally from Boston and New York and know that haling into Judge Utley's court means a \$15 fine. Only one escaped last year. Last year motorists feared only Jim Quinn and his traps in the hill town of Leicester, where so many motorists participating in the 1906 Glidden tour that passed through Massachusetts were arrested and fined. This year, however, they not only run the gauntlet of traps in Leicester, but one in New Worcester, and also in Paxton and Holden if they take any side trips. Other traps are scattered throughout the county to catch unwary motorists.

This season saw a new set of traps spring into prominence. It was as if all the neighboring towns set out with the express purpose of competing with Leicester to see which could have the most arrests to its credit. Fortunately for mo-

torists the new Massachusetts law, now in effect, does not allow the towns the right of regulating the speed limits, or motorists would have been at the mercy of the towns and their officers. Leominster is the only one regulating the speed down to 12 miles an hour, while the state law allows 20 miles an hour. Motorists believe that if a test case is made the chief of police over in that northern Worcester county town will not be enabled to arrest motorists who travel within the limitations of the law of Massachusetts.

Quinn found he had worked the Leices-



SPEED TRAP IN CHERRY VALLEY

ter powerhouse trap to the limit, therefore he practically discarded it, only using it occasionally. The power trap was between two hills. The cars were thus timed either way—as they coasted down one hill and put on speed to take the oncoming hill, or vice versa. It worked both ways and Quinn got all that was coming to him. For haling a motorist into court, the officers' fees are in the neighborhood of \$7.50 for each conviction. This finally became so profitable that in season Quinn the greater part of the time dropped his trade in a carding factory in Leicester to trap unwary motorists. He found a new trap, known as the Cherry Valley postoffice course, Cherry Valley being a little hamlet under the jurisdiction of Leicester. The trap works to perfection and is another that ends on the rise of a hill, catching drivers while powerless.

Holden, Mass., to the north of Worcester, was the first county town to emulate Quinn. The town blossomed forth with two traps, although one was later discarded, because the drivers became wary. Holden also has a powerhouse course. A long level stretch alongside the Worcester and Holden street railway powerhouse was selected for the trap, with Deputy Sheriff Mirick in charge of the constables running it. Quinn and Mirick are both expert in submitting testimony and never fail to secure convictions.

Chief of Police Pike of Paxton only



HERMITAGE CLUB, DEDICATED TO MOTORISTS

recently attained the dignity whereby he can put in his evidence in such shape as to secure convictions. He at first testified that he only had one eye and now that he has become scientific he has a haughty stare for the attorney who remarks about his one eye.

Without much success the Worcester Automobile Club some time ago offered to furnish counsel to any motorist who would fight his case in the courts, provided he felt his arrest was not justified by the circumstances. The club counsel would appeal the case to the superior court and in this way a great many motorists got off. Another reason for the club doing this was that by appealing cases the revenue from the convictions did not revert to the town but went to the county, so the towns had to bear all the expenses of securing convictions of motorists without a cent in return.

As a result of the wholesale crusade against motorists, the hotels of the various country towns have suffered heavy losses, as the motorists prefer to cut a town than leave a cent where they feel they have been trimmed.

Car owners in this section, though, have other things to think of besides speed

traps. They have become impressed with the joys of club life since the Hermitage Country Club, which is an organization whose membership lists are confined solely to motorists, started on its first whole season. It is backed by Boston, Worcester county and New York city motorists. There are more than 100 members. For the most part all its members reside within a radius of 50 miles of the heart of the commonwealth—men prominent in a social and business way throughout the state. All the appurtenances of an up-to-date country club mark the Hermitage, but unless a man is a motorist he cannot get within the charmed circle.

This club was until the recent formation of a similar club at Grand Rapids, Mich., the only one of its kind in the country and it has a distinct purpose. That purpose is to provide a club where members and their families may lunch, dine or pass the night. The club has purchased from Henry Batjer, of New York, the famous Hermitage estate.

It was developed by the late A. Swan Brown, who intended to make it a second Lenox, but he died before he could see his one ambition realized. He saw to it that the site retained all its wild

primitive beauty. He never allowed any improvements such as the leveling of lawns or the laying out of flower gardens. The original cost to Mr. Brown was \$61,000 and upon the death of his aged mother it was sold at public auction to Henry Batjer, father-in-law of Luther C. Brown, a son of A. Swan Brown and a member of the new club. Mr. Batjer has sold the estate with the improvements to the club for just what he paid for it—\$27,000. The club grounds are very extensive and are easily reached by motorists traveling on the through turnpike from Boston, New York and intermediate points by turning up Apricot street in New Worcester. The club is about 1¼ miles from the turnpike. The estate and grounds comprise about 275 acres of fine wooded park land. The lodges devoted to the club are the Hermitage and Vista. They are very large and well furnished and are admirably adapted to the purposes of a country club in every particular.

A little to the west of the Hermitage is a large boulder that is a never failing source of attraction to everyone who visits the estate and grounds. On this large boulder and easily read Solomon Parsons had a deed cut more than 50 years ago.



HOME OF COUNTRY CLUB NEAR GRAND RAPIDS, MICH.

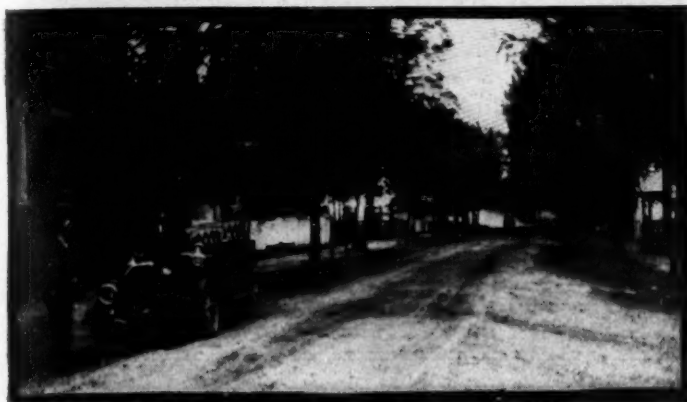


FIRST NEW TRAP IN CITY OF WORCESTER



RAMBLER IN SPEED TRAP IN LEOMINSTER

FROM WASHINGTON TO HARPERS FERRY



PASSING THROUGH TOWN OF JEFFERSON



A SECTION OF THE NATIONAL PIKE WELL LIKED BY MOTORISTS

WASHINGTON, D. C., Sept. 1—One of the best short motor car runs in this vicinity is to Harpers Ferry, W. Va., by way of Olney, Ridgeville, Newmarket, Frederick and Jefferson. The distance one way is 73 miles and the route is through one of the prettiest sections of Maryland, part of it being over the national pike. This is a route popular with the Automobile Club of Washington for its club runs. On a recent trip of this sort the start was made from the club's country home on the Brightwood road. The first stop was at Olney, 20 miles out, where the tourists lined up to pay toll. From Olney the road turns sharply to the left and passes through a rich agricultural country. From Washington to Olney is a fine stretch of macadam road, broken occasionally by water breaks. These may serve a useful purpose, but it would be hard to convince a motorist of that fact. From Olney to Ridgeville is a dirt road that is fine when the weather is good, but gets rutty after a hard rain. Fortunately for the Washington tourists the road was thoroughly dried out and the few hills were easy to negotiate. Ridgeville is about 34 miles from Washington and in bygone days was a favorite resting place for cyclists. Motorists also look with favor upon the town, for it is a good place

to refresh the inner man. The famous national pike is encountered at Ridgeville and leads straight into Frederick. A private company now maintains the road through tolls collected from all who pass over its surface. If the much detested water breaks were eliminated the pike would be all that could be desired.

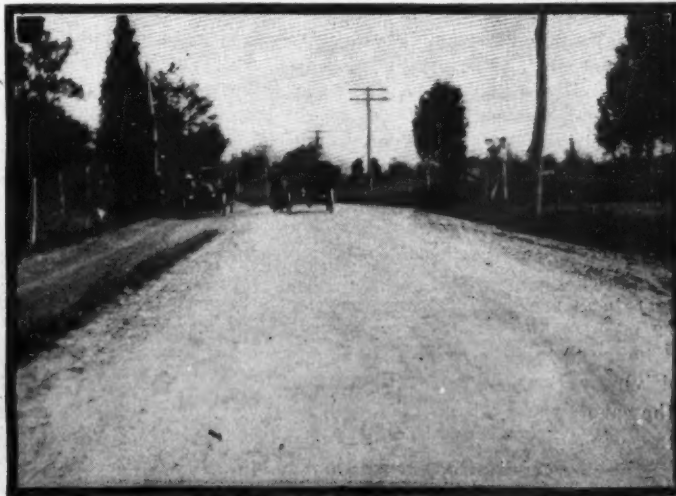
A few miles this side of Frederick is the famous Jug bridge spanning the Monocacy river. The bridge gets its name from an immense stone jug that marks its approach. Inscribed around the neck of the jug is the following: "Jonas Ellicott first produced the bold plan for this bridge with arches of 65-foot span; built 1808-09." Frederick was reached early in the afternoon and the famous old war-time city gave the tourists an enthusiastic reception. A short stop was made and then began the last lap to Harpers Ferry. A splendid piece of road was encountered just outside of Frederick, which was followed for 10 miles. It was nearly level and as smooth as an asphalted street. The temptation to hit it up over this road was irresistible. The good road ended just before entering Jefferson and then the really hard part of the trip began. The hills between Jefferson and Harpers Ferry are long and steep and must be negotiated with care. The scenery here-

abouts is very picturesque and more than makes up for the hard climbs. A sharp descent is made from the hills to the valley of the Potomac and then you are in Harpers Ferry. An iron bridge spans the river and all who would cross must pay for the privilege. The bridge keeper has a schedule of rates, but motor cars do not happen to be on the schedule and the keeper must perforce use his own judgment in levying toll. He never gets left, for he taxes motor cars about three times as much as any other vehicle. Protests are of no avail and there is no redress. As a matter of fact the toll charged all along this route is claimed to be entirely out of proportion to the road service given. The traffic is heavy and one wonders where the money goes.

The tourists established headquarters at the Hill Top house, which is reached by a road that winds in and around the mountain. The view from the hotel porch is magnificent and is long to be remembered. The trip was made in 6 hours, the arrival being timed for the dinner hour. The motorists owned the hotel from their arrival and were the envy of the balance of the hotel guests. Everyone saw the sunrise, a sight well worth the trip. The homeward journey was begun in the afternoon, the clubhouse being reached at 6 p. m.



HILLS SURROUNDING HARPERS FERRY, POTOMAC IN FOREGROUND



SOME MARYLAND ROADS ARE FINE—THIS IS ONE OF THEM

ITALY SCORES ANOTHER RACING TRIUMPH

Race	Winner	Car	Country	Second	Car	Third	Car	Distance	Time
Florio Targa.....	Nazzaro....	Fiat.....	Italy.....	Lancia.....	Fiat.....	Fabry.....	Itala.....	290	8:17:36
Tourist trophy.....	E. Courtis..	Rover.....	England....	J. Reid.....	Beeston- Humber...	.....	.....	241 5-8	8:23:27
heavy cars.....	G. P. Mills..	Humber...	England....	G. Fenton...	Gladiator...	.....	.....	201	7:11:01
Emperor's cup.....	Nazzaro....	Flat.....	Italy.....	Hautvast...	Pipe.....	Joerns.....	Opel.....	300	5:34:26
Grand prix.....	Nazzaro....	Flat.....	Italy.....	Szisz.....	Renault...	Baras.....	Brasler...	478 3-10	6:46:33
Sportive commission	De Langhe..	Darracq...	France.....	Mottard...	La Bulre...	Demogeot...	Darracq...	300	5:18:23 3-5
Ardennes, emperor's cup rules.....	Brabazon...	Minerva...	Belgium....	Koolhoven...	Minerva...	Guinness...	Minerva...	375	6:14:05
Ardennes, grand prix rules.....	De Caters...	Mercedes...	Germany....	Guinness...	Darracq...	.....	.....	375	6:29:10
Liederkerke.....	Porliet.....	Minerva...	Belgium....	.....	.....	.....	.....	325	6:40:11
Press cup.....	Renaux.....	Peugeot...	France.....	Vimont.....	Westinghouse	Zellele.....	De Dion...	250	4:32:00
Targa Florio, em- peror's cup rules.	Minola.....	Isotta.....	Italy.....	Hemery.....	Benz.....	Hanriot.....	Benz.....	304	4:39:54
Targa Florio, grand prix rules.....	Cagno.....	Itala.....	Italy.....	Demogeot...	Darracq....	Rougier.....	De Dietrich..	304	4:37:36

WINNERS OF THE LEADING ROAD RACES IN 1908 RUN OVER EUROPEAN COURSES

BRESCIA, ITALY, Sept. 2—Special cablegram—Italy again has demonstrated its superiority in a racing way over France by winning both divisions of the Florio cup race, Minoia, comparatively unknown as a driver of international repute, taking the race run under emperor's cup rules on Sunday in an Isotta Fraschini, and Cagno, driving an Itala, winning the division under grand prix rules today. In the first event France was not placed, but in the one today it had Demogeot second in a Darracq and Rougier third in a de Dietrich.

As was the case in the Ardennes the race run under emperor's cup rules attracted the largest field, thirty-four cars lining up for the contest which was over a distance approximately 304 miles in length. The circuit had to be covered eight times and for the first few laps everything ran smoothly; then Henri Fournier in an Itala broke down and quit. One fatality marked the event, Baron de Martino being killed.

Baron de Martino was an Italian amateur, 30 years of age. As the young baron approached the grand stand on his fourth round the great throng broke by the guards and swarmed on the course. In an endeavor to avoid the reckless spectators the baron steered his Zusto to the side of the road. The car was capsized and completely wrecked. Its driver, who was instantly killed, was pinned beneath the car. Begin, his mechanic, received injuries so severe that his recovery is doubtful. Hieronymus, a German, in endeavoring to pass another driver ran into Tomaselli, who was driving a German car of the same make, and sustained a broken nose. Durlacher, driving a German car, ran it off a bridge and was seriously injured. Primoers, driving a Rapid, dashed into a tree and was severely injured.

The weather was fine and a large crowd witnessed the struggle. Minoia had a big margin at the end, his time being 4 hours 39 minutes 54 seconds in comparison with 4 hours 49 minutes 49 seconds by Hemery, driving a Benz. Another Benz was third, the car driven by Hanriot making the distance in 4 hours 57 minutes 47 seconds.

Fourteen cars started in the event today, run under grand prix rules, and the winner turned up in Cagno, who was at the wheel

of an Itala. He showed more speed than did Minoia by about 2 minutes. It was an easy victory, too, Cagno being one of the last to start and gaining the lead in the fifth lap, after which he had nothing Darracq driver, was second in 4 hours 37 minutes 36 seconds. Demogeot, the Darracq driver, being second in 4 hours 40 minutes 59 seconds. Rougier, also French and handling a de Dietrich, was third in 4 hours 45 minutes 31 seconds. Cagno averaged about 65 miles an hour.

One American competed in this race and ill-luck pursued him. It was Elliott F. Shepard in a Bayard. Shepard got away well and at the end of the first lap he was leading. The second circuit shifted him back a notch and so did the third. In the fourth lap, when he was in fifth place, the accident occurred. He was crossing the Chiari river when he lost a tire. The car jumped and bounded and finally shot down a 15-foot embankment into the river, taking with it Shepard and his mechanic. The two men were pulled out of the water and taken to the hospital at Monte Chiari, where it was discovered that Shepard's collar-bone was broken. He also suffered from slight injuries.

The Brescia circuit race marked the end of road racing for the season of 1908, a season which has seen France deposed from its proud position as leader in the racing game. It also resulted in the humiliation of France as a maker of rules, for its grand prix regulations proved anything but satisfactory, as was evidenced by the fact that the emperor's cup rules drew the largest entries. In the Ardennes and in the Brescia both sets of rules were tried, but in each instance the emperor's cup field was the larger. Italy swept the boards so far as the real classics were concerned, Nazzaro and the Fiat winning the Targa Florio, the emperor's cup and the grand prix, while in the Brescia meeting Minoia in the Isotta Fraschini and Cagno in the Itala were winners. France has for consolation a win in the sportive commission cup race, a minor event in which the field was made up largely of cars of French construction, and also in the Press cup event, the latter also a home affair. Bel-

gium comes in for no little glory through the showing made by Minerva cars in the first half of the Ardennes in which the Minerva ran one, two, three, and in the Liederkerke cup event in which Porliet in a Minerva scored. Also it had Hautvast in a Pipe second to Nazzaro in the emperor's cup race. Germany shows once—in the second half of the Ardennes in which de Caters scored in a Mercedes over Guinness in a Darracq.

England did not try for much away from home. D. M. Weigel, a British maker, put a team of eight-cylinder cars into the grand prix but none of them showed. It was in the two tourist trophy races on the Isle of Man that the English colors were triumphant, but England is in about the same position as France—it lacked rivals in the races in which it won. The tourist trophy races really were economy tests, the cars being required to go the distance on a stipulated quantity of gasoline as they were in the grand prix. England had two races under the tourist trophy rules, one of them being for heavy touring cars. In the regular tourist trophy event there were only two cars to finish, a Rover being first and a Beeston-Humber second. Only two finished in the other division also, the winner turning up in a Beeston-Humber, with a Gladiator second.

In the way of driving honors no one disputes the claims of Felipe Nazzaro, who, critics opine, has rightfully succeeded to the throne vacated by the mighty Thery. Nazzaro's feat of winning the three biggest races of the year—the Targa Florio, the emperor's cup and the grand prix, is regarded as phenomenal and as showing the caliber of the man. Nazzaro's policy has been patterned much after Thery's. He plays cautious the first half of the race, contenting himself with a position well up, then when the leaders commence to come back to him he presses on and takes advantage of their weaknesses. He has had assistance, though, in that his team mates have been Lancia and Wagner, who have helped him play the game by going out in front and worrying the leaders, as was witnessed in the grand prix when Lancia forced Duray to take chances that he might not have ventured had not the big

Italian been at his heels all the time.

Wagner jumped from the Darracq to the Fiat and this caused somewhat of a sensation. But the change did not seem to do him much good, for the name of Wagner does not appear in the final summing up of results. Lancia showed once—when he ran second to Nazzaro in the Targa Florio. Also he was prominent in the grand prix until in the last lap misfortune overtook him and put him down and out.

Szisz, winner of last year's grand prix, did not figure outside the second running of that classic, which he made a determined effort to win. He it was who gave Nazzaro battle and to him the French take off their hats and hail as their best. Hemery is a deposed hero—a sort of motoring soldier of fortune—in one car in one race and then switching to another. Demogeot failed to make good the promise held out by his victory over the Florida sands and his engagements have been confined to minor events. He was twice placed—once in the sportive commission in which he was third and again in the second half of the Brescia circuit race.

More fatalities than usual are recorded in connection with road racing on the continent, but it was in the preliminary training that most of the accidents occurred. Probably the most prominent death was that of young Albert Clement, regarded as the most promising French driver, who was killed training for the grand prix and whose death cast a gloom over the entire racing world.

ACCIDENTS AT READING

Reading, Pa., Sept. 2—A brace of accidents to star entrants previous to the races spoiled the meet of the Reading Automobile Racing Association last Saturday afternoon. The Pennsylvania of H. B. Stillman, of Philadelphia, and the Jackson, driven by Chester B. Smith, of Harrisburg, were both put hors de combat while trying out. The Jackson spill was a bad one, Smith and his helper, George E. Winger, both being badly bruised and shaken up, the former sustaining in addition a broken wrist. As a result the two big events of the day had to be called off. George B. Parker, of Philadelphia, offered to pit his Oldsmobile against the Pullman, driven by Robert Morton, but the latter demurred on the ground that the Oldsmobile had not been regularly entered. Parker went over the 3 miles anyway, and at the conclusion of the races the judges decided to award him the cup. J. E. Sellers drove his Maxwell to the front in three events, winning the association cup, 3 miles, in 4 minutes 45½ seconds, the 5-mile Eagle trophy cup in 8 minutes 2½ seconds and the 6-mile handicap, with 30 seconds' start, in 7 minutes 6 seconds. The Pullman, driven by Morton, pulled down the R. A. R. A. challenge cup, 3 miles, in 4 minutes 36¾ seconds, and Theodore Schultz captured the 5-mile motor cycle race on a Reading Standard in 9 minutes 2½ seconds.

TWO KILLED IN DENVER

C. V. Dasey and W. B. Felker Meet Death in Meet Held at Overland Park—Four Races Run

Denver, Col., Sept. 2—Special telegram—Two fatalities this afternoon brought to an end the motor meet at Overland track after four races had been run, two of which had been won by the Stevens-Duryea and a third by an Oldsmobile. The other was an exhibition. It was in the feature race, a 50-mile event for all classes, that the two deaths occurred, Clarence V. Dasey and W. B. Felker being the victims. Dasey was acting as mechanic for Kirk in the 50-horsepower Apperson Jackrabbit and in the fifth lap of the race the big car lost a rear tire. The skidding which followed threw Dasey from his seat and the wheel passing over his neck killed him. Later in the same race, in the thirty-eighth lap, a Thomas Forty and a Stevens-Duryea, the latter driven by W. B. Felker, ran off the track. The Thomas man escaped injury, but a splinter from the fence timber stabbed Felker to the heart, killing him instantly. This caused the race to be stopped and the meet was abandoned.

Dasey and Felker both were prominent in the trade and both ex-Chicagoans. Dasey was an engraver by occupation, but identified with the local trade as a demonstrator and salesman. Felker was at the head of the Felker Automobile Co. and had won the first race on the card.

The first race was a 5-mile event for stripped stock gasoline touring cars. W. B. Felker, driving a big six Stevens-Duryea, won in 5 minutes 8¾ seconds. A 35-horsepower Stevens-Duryea was second in 5 minutes 24 seconds and a 50-horsepower Apperson third in 5 minutes 37¾ seconds. A Thomas Forty collided with the Ford six. It crowded the latter into the fence at the start and both were put out of commission for the race.

The second race was a 5-mile event for fully equipped touring cars carrying three passengers and a driver. The big six Stevens-Duryea won in 5 minutes 37 seconds, with a Thomas Flyer second in 6 minutes 20¾ seconds. The winner was last to leave the tape. The Thomas was an eighth of a mile ahead before the Stevens began to show speed. It overtook the Thomas and crossed the wire at the first mile in 1 minute 17¾ seconds, with the Thomas 8 seconds behind. The Stevens made the subsequent miles in 1 minute 5 seconds, 1 minute 4¾ seconds, 1 minute 5 seconds, 1 minute 6 seconds; the Thomas' time was 6 minutes 20¾ seconds. In event 3, a 5-mile for stripped cars, \$3,250 and under, a 35-40-horsepower Oldsmobile, entered by Mathewson Automobile Co. and driven by Paul S. Tobin, won in 5 minutes 28 seconds. The Thomas Forty was second in 5 minutes 46 seconds; the Ford six third in 5 minutes 49 seconds, and a 25-horsepow-

er Colburn fourth in 5 minutes 49¼ seconds. The Colburn is a car made in Denver and this was its introduction to the general public. It is a four-cylinder water-cooler built by the Colburn Automobile Co. The Thomas Forty was somewhat slow getting under way, for it took 1 minute 17 seconds to cover the first mile, 1 minute 8 seconds for the second and 1 minute 7 seconds for each of the three others. The Ford crossed the wire the first time in 1 minute 19 seconds.

The 5 miles for stock cars, \$2,000 and under, was not filled and a special event took its place. Phil Kirk in the Apperson Jackrabbit gave an exhibition 5-mile run. His time by miles was 1 minute 6 seconds, 1 minute 5½ seconds, 1 minute 5 seconds, 1 minute 4¾ seconds, 1 minute 4 seconds; total, 5 minutes 24¾ seconds.

Then came the race in which the fatalities occurred, a 50-mile event for cars of all classes. There were seven entries, as follows: Apperson Jackrabbit, Phil Kirk driver; Colburn, J. T. Dickson driver; 35-horsepower Stevens-Duryea, George Maxwell driver; 40-horsepower Ford, A. T. Wilson driver; 50-horsepower Stevens-Duryea, W. B. Felker driver; 40-horsepower Oldsmobile, P. S. Tobin driver. The cars got off pretty well bunched, but the big six Stevens soon set the pace, with the Thomas close at its heels. In the fourth mile the Thomas did it in 1 minute flat, and the big six clipped off the ninth and the thirteenth in the same time. As the laps were reeled off it developed into a race between the Thomas and the big six, and when the second accident occurred the big six was trying to pass the Thomas for the second time. The Oldsmobile was doing smooth and regular work all through the run and kept on going while all the excitement was on and did not slow down until flagged. When the race was called the following was the score: Oldsmobile, 38 miles; big six Stevens-Duryea, 35 miles; Thomas Forty, 35 miles; little Stevens-Duryea, 35 miles; Ford, 33 miles.

BIG MEETING PLANNED

Philadelphia, Pa., Sept. 1—Some time during the present month there will be a meeting of the Pennsylvania Motor Federation at Bedford Springs for the purpose of talking over plans for the betterment of the game—improvements in legislation, good roads, etc.—and the officials have proposed that all clubs within the jurisdiction promote a run to the springs on the date decided upon. The Automobile Club of Philadelphia and the Quaker City Motor Club have both taken hold of the idea and are organizing a combined run. It is quite probable the Germantown club, which is quite prominent in the counsels of the federation, will also join the movement, along with all the clubs within a day's ride of Bedford. As at present outlined the run will in all likelihood be a Saturday-to-Monday affair—a day to go, a day at the springs and a day to return.

OPPOSE A. L. POPE AS RECEIVER

Connecticut Creditors Reported To Be Against Appointment Being Made Permanent When Case Comes Up in Hartford—Appraisers at Work on Inventory

Hartford, Conn., Aug. 30—Judge Case of the superior court Wednesday afternoon appointed John R. Hills and Frederick C. Billings appraisers of the assets of the Pope Mfg. Co. within the state of Connecticut. The hearing of yesterday has been continued to September 16 and until that time Albert L. Pope will officiate as receiver. Much opposition was developed to A. L. Pope as permanent receiver at the hearing which was on the notice to creditors for the confirmation of temporary receiver and the appointment of appraisers. Arthur L. Shipman presented statements of the receiver from August 14 to August 26 showing cash receipts for the period of \$100,411.12 and disbursements of \$52,922.21, the receipts exceeding the disbursements by \$47,488.91. The statement of the receiver showed earnings of \$13,247.71, the figures show as follows:

CASH RECEIPTS FROM AUGUST 14 TO AUGUST 26

Balance in American National bank, Hartford, taken over by receiver..	\$ 19,529.98
Balance of office cash taken by receiver	717.57
	\$ 20,247.55

Receipts from collection of accounts receivable of Pope Mfg. Co. on books August 14.....	59,888.46
Receipts from sales by receiver.....	7,500.11
Receipts from deposits by customers on orders for motor cars.....	12,775.00
	\$100,411.12

DISBURSEMENTS, AUGUST 14 TO AUGUST 26

Preferred claims for services and expenses of employees paid by receiver	\$ 14,604.83
Refund of motor car deposit of Covey & Wallace.....	2,000.00
Receiver's expenses and payment for purchases, pay roll factory and office	14,056.42
Selling and sundry expenses.....	1,119.05
Materials and supplies.....	71.08
Cash advances for pay rolls and expenses—	
To Westfield, dist. of Mass.....	11,739.22
To Hagerstown, dist. of Maryland.....	9,213.61
To dist. of Illinois.....	118.00
	\$ 52,922.21

Balance American National bank, Hartford	43,699.28
Balance First National bank, Hartford	2,390.85
Cash in office.....	1,398.78
	\$ 47,488.91

ACCRUED LIABILITIES OF RECEIVER

Miscellaneous expenses.....	\$ 280.65
Material and supplies.....	8,148.81
Pay rolls, factory and office.....	10,239.28
	\$ 18,668.74

Sales August 14 to August 26....	\$ 36,388.00
Less collections as above.....	7,500.11
Accounts receivable from receiver..	\$ 28,877.89
Deposits on orders, minus refunds..	10,775.00
	\$ 39,662.89

ACTION OF RECEIVER TO AUGUST 26

Receiver's sales.....	\$ 36,388.00
Deposits on motor cars, less refunds	10,775.00
	\$ 47,163.00

Pay rolls.....	\$ 14,056.42
Expenses and purchases.....	1,190.13
Accrued liabilities—	
Pay rolls.....	10,239.38
Expenses and purchases.....	8,429.46
	\$ 33,915.30

J. R. Sheffield, a New York lawyer representing a number of creditors, stated that notice of the company's difficulty had just reached them. There was, he said, strong opposition to A. L. Pope serving as permanent receiver, and asked that the hearing be continued, Judge Case setting the date for September 16, after which the meeting adjourned. The selection of appraisers occasioned something of a wrangle among the interested attorneys. Judge Case's order, aside from making the appointment of appraisers, directs A. L. Pope as temporary receiver to file in the office of the clerk of the superior court on or before September 16 an inventory of the assets of the company within the state of Connecticut, orders the temporary receiver's bond of \$200,000 continued and also orders the receiver to continue business 4 months from the date of the order and file September 16 a verified statement and account showing the results of business and doings as temporary receiver, from August 28.

There is much speculation as to who will be permanent receiver and local agitation favors very naturally some well known Hartford individual.

The big plant of the Pope Mfg. Co., in this city is to be closed down for a few days to permit the appraisers, John R. Hills and Frederick C. Billings, to take inventory. Part of the office force will assist in the work. It is said the work of stock taking will require but a few days and operations will be resumed shortly after. The list of creditors of the company has been prepared and will be presented to the clerk of the superior court today. Claims of \$1,000 or more are reported as follows:

Acme White Lead and Color Works, Detroit, Mich.	\$ 1,048.60
Aetna Life Insurance Co., Hartford Conn.	3,450.00
Ashtabula Carriage Bolt Co., Ashtabula, O.	1,956.64
Auto Supply Mfg. Co., New York....	2,062.89
Badger Brass Mfg. Co., Kenosha, Wis.	9,692.10
Barber Leather Co., North Adams, Mass.	1,206.39
Bartlett & Co., New York.....	8,850.14
Benedict, Downs & Co., New Haven, Conn.	2,192.03
Bidwell, Smart Co., Amesbury, Mass.	7,430.31
Hugo Bilgram, Philadelphia.....	1,007.67
Billings & Spencer Co., Hartford, Conn.	2,855.28
Edward J. Blake, Hartford, Conn....	3,018.04
E. W. Bliss Co., New York.....	5,475.04
Boston Mutual Fire Insurance Co., Boston, Mass.	4,900.52
Briscoe Mfg. Co., Newark, O.	2,077.25
Burroughs Adding Machine Co., Detroit, Mich.	1,437.85
Capitol Foundry Co., Hartford, Conn.	6,640.70
Coe Brass Mfg. Co., Ansonia, Conn....	7,719.57
Colonial Steel Co., Boston, Mass....	1,599.87
Connecticut Telephone and Electric Co., Meriden, Conn.....	1,687.31
Continental Rubber Works Co., Erie, Pa.	2,677.19
Corbin Screw Corporation, New Britain, Conn.	8,472.80
Crosby Co., Buffalo, N. Y.	2,399.60
Crucible Steel Co., Pittsburg, Pa....	1,115.28
D. Delaney & Son, Newark, N. J.	1,961.35

Detroit Lubricator Co., Detroit, Mich.	7,675.61
Detroit Steel Products Co., Detroit, Mich.	1,623.67
Diamond Chain and Mfg. Co., Indianapolis, Ind.	4,817.18
A. M. Eames & Co., South Framingham, Mass.	1,428.63
Electric Storage Battery Co., Philadelphia	2,621.27
Farrist Steel Co., Bridgeport, Conn....	18,600.32
Fisk Rubber Co.	1,557.88
John P. Forst, Chicago.....	6,250.00
Fulton Foundry and Machine Co., Brooklyn, N. Y.	1,390.20
G & J Tire Co., Indianapolis, Ind....	5,768.31
Goodyear Tire and Rubber Co., Akron, O.	1,236.51
John H. Graham & Co., New York....	9,872.19
Gray & Davis, Amesbury, Mass.....	8,272.90
D. B. Briggs & Sons, Chicopee, Falls, Mass.	1,103.06
Hartford Rubber Works, Hartford, Conn.	10,092.88
Howarth & Rogers, Amesbury, Mass.	1,578.02
Jewell Belting Co., Hartford, Conn....	1,621.74
J. W. Jones, New York.....	1,463.53
Jones, Caesar, Dickerson & Co., New York	5,112.78
W. A. Kinne, New Britain, Conn....	2,611.78
Knauth, Nachod, Kuhne, New York....	1,030.24
Lavalette & Co., New York.....	6,931.74
W. H. Leland & Co., Worcester, Mass.	2,148.00
Light Mfg. and Foundry Co., Pottstown, Pa.	2,455.80
McLeod & Co., Chicago.....	1,278.75
MacManus, Kelley Co., Toledo.....	8,695.30
Murphy Varnish Co., Newark, N. J.	3,423.82
Mutual Rim Co., Onaway, Mich....	1,126.60
National Battery Co., New York....	3,672.42
National Carbon Co., Cleveland, O.	2,244.05
National Lead Co., New York.....	3,059.98
National Trade Association, Cincinnati, O.	1,027.50
Noeva Mfg. Co., Waterbury, Conn....	1,358.30
Norton Grinding Co., Worcester, Mass.	1,414.60
Phosphor Bronze Smelting Co., Philadelphia	11,610.14
Plimpton Mfg. Co., Hartford, Conn....	1,030.41
Pratt & Whitney Co., Hartford, Conn.	2,105.77
Prentice Tool and Supply Co., New York	1,252.70
Protection Mutual Fire Insurance Co., Chicago	1,421.64
Rajah Auto Supply Co., New York....	1,922.82
P. Relly & Son, Newark, N. J.	2,157.82
J. R. Rowland, New York.....	2,998.96
W. & H. Rowland, Philadelphia....	4,578.27
Shelby Steel Tube Co., Pittsburg, Pa.	14,259.31
F. F. Small & Co., Hartford.....	5,916.86
C. F. Splittorf, New York.....	3,573.34
Standard Oil Co. of New York, Providence, Baltimore and Hartford....	10,001.10
Standard Co. of Torrington, Conn....	5,475.01
J. Walter Thompson Co., New York....	1,447.06
Timken Roller Bearing Axle Co., Canada	2,166.38
Union Drawn Steel Co., Beaver Falls, Conn.	4,643.64
Union Drop Forge Co., Chicago.....	1,366.38
Union Drop Forge Co., Springfield, Mass.	2,341.32
Vulcan Iron Works Corporation, New Britain, Conn.	11,375.16
Warner Instrument Co., Beloit, Wis.	1,303.50
A. H. Welles Co., Waterbury, Conn....	1,535.94
Western Union Telegraph Co., Hartford, Conn.	1,949.56
White & Bagley Co., Worcester, Mass.	1,678.71
W. W. Woodruff & Sons Co., Mt. Carmel, Conn.	1,967.47
York Wagon Gear Co., York, Pa....	2,741.00
Zucker, Leuett & Loeb Co., New York	1,278.36

OILING HARTFORD'S STREETS

Hartford, Conn., Sept. 1—This city, the home of two makers of motor cars, must, like other municipalities, contend with the dust evil. Thus far sprinkling with water has been the only relief, and the relief is of such short duration that it is hardly worth consideration. The streets of the city are in an abominable condition and nothing seems to have been done or will be done in the near future to better them. Motor cars are numerous and render a good roadway imperative. The streets are full of ruts and depressions, which retain the water used for sprinkling, to the discomfort of those who fall therein, as is frequently the case. Residents along main thoroughfares cannot use their front porches owing to the dust. About the most

sensible thing that has ever been done locally is to experiment with oil. This product is termed by its exploiters oil of asphaltum, though it strongly resembles crude petroleum, but whatever it is it has done the trick to perfection and dust is unknown where it has been spread. The oil is distributed by means of a sprinkler cart and the flow of the fluid is controlled by an operator seated directly over the spouts. After the oil has been spread, men with heavy street brooms or brushes work into the road surface. The first application, as might be expected, aroused a storm of objection from the women, who had visions of ruined hosiery and shoes, but nothing of the sort has happened and now those same fair ones may sit without their doors and not swallow dust.

WATCH A VANADIUM HEAT

Detroit, Mich., Sept. 2—Metallurgists, chemists and heads of technical laboratories have for several months been watching closely and with increasing interest the result of the Ford Motor Co.'s tests with various grades of vanadium steel. The making and rolling of the last batch of vanadium steel by the Ford experts at the plant of the United Steel Co. at Canton, O., was witnessed by a dozen practical men, all interested in various branches of the motor car industry, and who were there to learn what vanadium holds out for them in the way of increased quality of material for springs, bearings, forged parts, etc. Those present were: O. F. Transue, Transue & Williams Co., Alliance, O.; H. W. Alden, Timken Roller Bearing Axle Co., Canton, O.; F. W. Hedgeland, Hedgeland Mfg. Co., Canton, O.; H. C. Haight and F. J. Groth, Cleveland-Canton Spring Co., Canton, O.; C. W. Cathcart, Hess-Pontiac Spring Co., Pontiac, Mich.; C. H. Wills and E. S. Huff, Ford Motor Co., Detroit, Mich.; C. L. Bockus, Western Malleable Co., drop forge department, Detroit, Mich.; D. Goddard, White Co., forge department, Cleveland, O.; B. F. Little, sales manager, and Harry R. Jones, secretary, United Steel Co.

CAB SERVICE FOR NEW YORK

New York, Sept. 4—Special telegram—The New York Taxicab Co., of which Henry N. Allen is president, will introduce taximeter cabs in New York on the 20th of this month. They are to be 14-16-horsepower four-cylinder Darracqs, of which thirty-one were reported at Albany yesterday. The company, which is incorporated in England, has ordered 600 cars, which are to be delivered at the rate of sixty per month. More than twenty-five leading hotels and restaurants have contracted for their services. The rate of fare will be 30 cents for the first half-mile and 10 cents for each additional quarter-mile and \$1 an hour while waiting. The drivers will work on a percentage basis. The price to be charged will be the same for one or four passengers.

MOTOR SCORES A POINT

F. J. Tyler, Boston Man, Triumphs Over Those Who Would Keep Cars Off Nantucket Island

Boston, Mass., Sept. 2—The motor war at Nantucket has advanced another stage, thanks to the action of Frank J. Tyler, of Boston, the representative of the Maxwell cars who accepted the defi hurled at the motorists by the selectmen of the little island. What happened was really good enough to be the basis of a plot for a comic opera. Tyler took a trip from Boston to the island a few days ago in one of his cars. On reaching the steamboat wharf he was told that if he went across they would not let him land. But he decided to try it, despite the warning.

Word of his coming preceded him by telephone and when the boat landed there was a big crowd at the wharf. He started to go down the gang plank when a constable stepped up to him and asked: "Say, do you know the law?" One of the party in the car answered that they did and the machine moved off before the surprised official could check it. He stood aghast at the presumption of the motoring party. Over to Sconset went the explorers and all along the route they were regarded with curiosity and surprise. Sometimes they were cheered. Reaching the actors' colony and the hotel they got a great reception.

Then they started to circle the island and on reaching one road found Chief of Police Cary waiting for them with a blank summons. Tyler surprised him by inviting him to get in and have a ride. But he declined. The summons was filled out and it directed that Tyler appear in court Friday and show cause why he should not be punished for violating the laws of the island kingdom. Tyler laughed, for he had a trick up his sleeve that held a hidden club for the officials.

He remained on the island while his lawyer hurried away to Boston to play a game that worked like a charm. When Justice Mooers opened court Friday to try the case against Tyler all the inhabitants who could get away were on hand to see the invader punished. He was to be given the limit, everyone thought, and the smile on Tyler's face puzzled them. When court was ready an attorney who had remained on the island handed the judge a bit of paper that caused him to wonder where he was at. It was a notice that an injunction had been asked for restraining him from trying the case. It ordered him to appear before Judge Hammond, of the supreme court of Massachusetts, at Boston, September 6, and show cause why he should not be restrained permanently from trying the case. No bombshell could have created a greater sensation than this injunction.

Tyler smiled one of those wicked, "looks as if the joke's on you, judge," grins as he sat there winking at some of the old

sailors and the actors who came to see his execution. There was nothing for the judge to do but to fold up his books like the Arab and silently steal away to the livery stable and confer with the selectmen. This means the judge will have to take a day off, go to Boston and see what he is up against. That the injunction will be made permanent there is little doubt, for the ordinance under which Tyler was arrested is declared to be clearly illegal. So others can do the same if they are arrested and this will result in throwing the island open to all cars. The expenses of coming to Boston, etc., will eat into the treasury of the town and the selectmen will find they have made a mistake, it is asserted by the motorists.

The reason the island has been closed to motor cars is said to be that some of the officials are in the livery business and as the summer colony is 8 miles away from the steamer landing it meant a lot of money carrying the sojourners back and forth. Many of them had motor cars that they would like to have used and be able to do the distance in 15 or 20 minutes instead of driving in a carriage that took more than an hour. Their cars have been in storage all summer on the mainland at quite an expense. It now looks as if the Nantucket selectmen had the worst of the first round of the battle and that if the motorists pressed the point they would win the case and open the island to motor cars, which is desired, it is said, by most of the summer visitors.

EXPORTS AND IMPORTS

Washington, D. C., Sept. 1—The announcement is made by the bureau of statistics that 345 motor cars, valued at \$727,391, were exported from the United States during July last, as against 266 cars, valued at \$485,672, exported during July a year ago. Parts to the value of \$27,507 were exported during July, 1906, increasing in value to \$68,934 in July last. During July last cars and parts were shipped to the following countries: United Kingdom, \$301,126; France, \$121,627; Germany, \$47,720; Italy, \$14,161; other European countries, \$21,992; British North America, \$183,508; Mexico, \$49,113; West Indies and Bermuda, \$10,028; South America, \$31,821; British East Indies, \$1,585; British Australasia, \$3,560; other Asia and Oceania, \$5,731; Africa, \$3,735; all other countries, \$618. Sixty-eight motor cars, valued at \$224,510, were imported into the United States during July, as compared with ninety-eight cars, valued at \$345,774, imported during the corresponding month of 1906. Imports of cars were received from the following countries: United Kingdom, 8, valued at \$38,163; France, 37, value \$107,915; Germany, 6, value \$27,163; Italy, 10, value \$27,682; other countries, 7, value \$23,587. Imports of parts fell from \$58,852 in July, 1906, to \$55,753 in July last. This report is received with gratification by makers of American cars.

BRACES UP RACE RULES

A. A. A. Revokes U. S. M. R. A. Sanctions and Suspends Both Pickens and Gaites

New York, Aug. 29—At a special meeting of the executive committee of the A. A. A. racing board held today action was taken to meet the demands of the present racing situation. The chief points that have been brought forward through criticisms of the rules and conduct of racing since an extensive revival of track racing has been promised through the promotion of long-distance contests and the reopening of Morris park, were all discussed and covered by action or statement of some sort. Those in attendance at the meeting were: A. R. Pardington, acting chairman; E. Lincoln Lippett, Rhode Island A. C.; S. M. Butler, A. C. A.; A. G. Batchelder, N. Y. M. C.; A. L. Riker, technical adviser, and F. H. Elliott, secretary.

The action of Acting Chairman Pardington in indefinitely suspending the United States Motor Racing Association; Joseph M. Gaites, its president; Fred T. Bailey, its vice-president, and W. H. Pickens, its manager, collectively and individually for failure to pay the prizes at the Brighton Beach meet was approved and all sanctions granted to the association were revoked by the racing board.

Hereafter all clubs lending their names to individual promoters are to be made responsible for the payment of the prizes and the proper conduct of the meet in accordance with a resolution recommending that the A. A. A. directors approve of the addition of the following paragraph to the racing rules: "Any club of the A. A. A. which associates itself in any way, wholly or partially, with the promotion of a race meet or contests shall become responsible for the delivery of the prizes as stated on the entry blank, and also for the enforcement of the racing rules of the A. A. A."

It was declared that the board recognized that the present racing rules require some revision to meet new and changing conditions and so its technical advisers were requested within the next 30 days to prepare for the board a draft of these changes, which in their opinion will bring about a more satisfactory classification and better general results in competition. The technical advisers in question are: E. R. Thomas, N. A. A. M.; A. L. Riker, A. L. A. M.; Henry Ford, A. M. C. M. A., and J. J. Mann, Automobile Club of France.

The consideration of the rules adopted by the Affiliated Automobile Clubs of the World was postponed until the return from Europe of Chairman Jefferson de Mont Thompson and W. K. Vanderbilt, Jr., who have had conferences while abroad with representatives of the foreign clubs interested in motor car racing.

The following definitions distinguishing

touring cars, touring runabouts and runabouts were adopted:

"Touring cars—A touring car shall be one provided with a tonneau and seats for at least five adults; two in front and three or more in the tonneau.

"Touring runabouts—A touring runabout shall be a car provided with two seats in front, and a single permanent seat in the rear.

"Runabouts—A runabout shall be a car provided with two seats side by side."

Walter White's protest against his steamer being barred from the free-for-all at the Wilkes-Barre hill-climb was sustained. He was adjudged the winner of the event, his time, 1 minute 49½ seconds, being the fastest of the climb. The protest of D. Walter Harper against being barred also was sustained. He was declared winner of events No. 4 and No. 7, his Stanley steamer having scored better times than the winners in these events.

The board declared itself unable to give consideration to the 24-hour race at Chicago July 12-13, no report yet having been received from the special committee of the Chicago Automobile Club which was requested to investigate and report on the event to the racing board. As soon as this report is made the A. A. A. will make its decision.

No decision was reached in the matter of the 24-hour race held at Detroit July 21-22, owing to the meager evidence at hand. Interested parties have been called upon to make affidavits supplying missing parts of the evidence.

The decision of Duncan Curry, referee at the Atlantic City meet, disqualifying A. W. Church's Stearns in event No. 3 on the ground that it did not comply with the definition of a touring car was sustained.

RELAY RACE NOT FAVORED

New York, Sept. 4—Special telegram—It has been decided to make the Morris park 24-hour race a single-car contest. It will be the feature of the opening meet of the Morris Park Motordrome Club next Friday and Saturday. It is said that few of the dealers or importers had two cars available for a long-distance race. Messrs. Reeves, Tucker and Camancho made a canvass of the row yesterday and rendered a decision today. Some of the entrants secured since the change was made today are the Frayer-Miller, de Dietrich, Matheson, Packard, Renault and Lozier. Indications point to fifteen contestants. Eighteen thousand gallons of oil were delivered on Saturday at the course. Sixty lights, such as were used at the Chicago race and are employed by the big circus companies, will illumine the track. Among the entries for the short-distance races are: Guy Vaughan, Stearns; Montague Roberts, Thomas; Maurice Bernin, Renault; I. B. Ryall, Matheson, and Frank Kuliek, Ford. The Scarritt flexibility test which promises to be a novel affair, is also filling well.

JERVIS ACTS AS HOST

Newspaper Men Take a Trip to Providence and Inspect Berliet Plant and New Cars

New York, Sept. 2—In charge of the publicity department of the American Locomotive Automobile Co. is Arthur N. Jervis. Backed by a \$50,000,000 company with full confidence and free rein accorded him by General Manager James Joyce and all officials of the company Jervis, by way of an opening gun in the 1908 publicity campaign, suggested that all the New York daily newspaper men and representatives of all the trade papers be invited to visit the company's factory at Providence to see for themselves just what was being done there and to have a try-out of the new models. The acceptance of the invitation was practically unanimous, so that the most comprehensive exodus from town resulted since Charley Shanks several years ago took the motor scribes out to look over the Winton plant at Cleveland.

The twenty-five invaders were met at the dock at Providence by the big Berliet bus and a touring car and taken to the hotel for a rousing big breakfast. This finished, no time was lost in getting to the factory. Here the party was divided into two divisions for an inspection of the works, one in charge of Mr. Joyce and the other piloted by F. M. Hoblitt—after, of course, having been extended an official welcome by Superintendent Boynton.

The round of the factory, which occupied the entire morning, was an eye-opener. The visitors saw what was meant by the statement that the Berliet is a French car built in America by American workmen. All the material comes from France and every part of the car save the bodies, the aluminum coverings and the spokes is from the Berliet factory in France. The vanadium steel is French. The parts are received in the rough and machined, finished, polished and fitted at the factory here.

The tour of the Berliet factory over, the party was piled into four cars for a 15-mile run out into the country to Chehachet inn for a New England dinner of chicken and other country goodies. Either going or coming all the visitors were given a chance for a ride in one of the new six-cylinder cars, two of which were included in the caravan. Even in climbing the gentle grades encountered no driver had a chance to give his car its full head of speed. In the trial tests, they say, a rate of 70 miles an hour has been attained by the big machines.

On the return to the factory a spokesman for the party thanked General Manager Joyce and the officials for their unbounded hospitality and congratulated them on their factory and their car. The visitors were sent back to New York last night in a special car on the fast merchants' express in charge of Jer-

vis' assistant press agent, Edward Korbel.

Mr. Joyce says that the company is planning to turn out 250 cars the coming season. The 1908 line will include, besides the six, a four-cylinder car of 40 horsepower, chain drive, fitted with touring or limousine body, and a four-cylinder town car of 24 horsepower, with shaft drive, finished with limousine or landaulet body. There will not be any radical changes in the 40 and 24-horsepower models. The six-cylinder car has the same wheelbase as the 40-horsepower four-cylinder car, 126 inches, and its weight is not much greater. The six-cylinder engine has 4¾-inch bore by 5-inch stroke and the length of the hood is no greater than that of some four-cylinder models, it is asserted. This car, as well as the 40, has a direct drive on both the third and fourth speeds. The ignition is by high-tension magneto, it has a force feed lubrication, multiple disk clutch, double chain drive, sliding gear transmission with selective control, four speeds forward and reverse and four brakes.

Press Agent Jervis will start on Sunday from Providence in the new six-cylinder Berliet on a tour of exploitation. The car will be driven by H. C. Townsend, who was the pilot of the Berliet in its perfect score Glidden tour run. F. M. Hoblitt, of the selling staff, will be a passenger and attend to agency business en route. Boston will be visited first and then New York. From here a run will be made direct to Chicago. After that St. Louis, Indianapolis, Cleveland, Pittsburgh, Scranton and Philadelphia will be visited. The tour will end in New York about the middle of October.

MOTOR ENTHUSIASTS MEET

Milton, Pa., Sept. 3.—The third annual meeting of the Automobile Club of Central Pennsylvania, consisting of motor enthusiasts from Lycoming, Northumberland, Montour, Columbia, Union and Snyder counties, was held Labor day. The officers' reports showed that much effective work had been done during the past year in several different branches and roads were repaired and better cared for in some heretofore neglected places; supervisors were informed of the laws and instructed to provide better sign posts, and the entire membership of the club has been affiliated with the Pennsylvania Motor Federation and American Automobile Association. The membership of the club shows a substantial gain over last year. The following officers were elected for the year: President, Senator Fred A. Godecharles, of Milton; vice-presidents, William P. Beeber, of Williamsport, for Lycoming county; Dr. Will L. Shindel, of Sunbury, for Northumberland county; W. W. Welliver, of Danville, for Montour; C. W. Funston, of Bloomsburg, for Columbia, and Ira M. Higbee, of Lewisburg, for Union county; Dr. W. K. Armstrong, of Sunburg, treasurer; Frank R. Slifer, of Milton, secretary.

GIVES OUT SHOW SPACE

A. M. C. M. A. Has Drawing and Reo Gets First Selection—Makers Discuss Trade

New York, Aug. 31.—The American Motor Car Manufacturers' Association held a meeting today in the Spalding building to draw for space in the eighth annual show of the Automobile Club of America, which is to be held in the Grand Central palace the week of October 24-31. The A. M. C. M. A. had 26,000 square feet of space to distribute among its forty-eight members, quite a task when it was discovered that the applications called for more than 30,000 square feet. Therefore it was necessary to trim the applications somewhat in order that all might get on the main floor.

A drawing was held and the Reo Motor Car Co. secured first choice. Others to secure center space were the Dayton Motor Car Co., the Ford Motor Co., Premier Motor Mfg. Co., National Motor Vehicle Co., Maxwell-Briscoe Motor Co., Mitchell Motor Car Co., Wayne Automobile Co., St. Louis Car Co., Jackson Automobile Co., Bartholomew Co., and the Mora Motor Car Co. The eight members who drew center spaces market about 23,000 cars a year.

Naturally with such a gathering of manufacturers there was a lively discussion of trade conditions participated in by Benjamin Briscoe, Maxwell; A. C. Newby, National; Gaston Plaintiff, Ford; W. H. Van Dervoort, Moline; R. B. Crawford, Crawford; C. F. Case, Rapid; H. O. Smith, Premier; Ray Owen, Reo; W. M. Lewis, Mitchell, and Frank Weston, representing D. M. Parry, of Indianapolis, the buggy manufacturer, who also is president of the Overland Auto Co.

The discussion indicated very clearly the present substantial standing of the motor car industry. All sections of the country were heard from and there was not a concern but reported a prosperous year, with the agents booking increased orders for 1908. As expected, a few concerns have been eliminated in the keen competition for business, but it was shown by state registrations that more cars are being registered than during 1906. The makers are now paying attention to the finer details of motor cars, the general designs of the present time being considered standard. It was shown that conditions for selling motor cars, particularly in the west, never were better. New factories are going up and preparations are being made for a great season in 1908.

A report of more than ordinary interest gave the number of cars which are being sold to farmers and include lists of sections where farmers are ready to buy the small types of motor cars at moderate prices. It was shown that in cities of 5,000 and less the demand for motor cars selling at less than \$1,000 was just be-

ginning to be felt and it is along these lines makers will look for new business.

That early shows will be as popular this year as late shows have been heretofore is evidenced by the number of applications made for space at the Madison Square garden show, November 2-9, under the direction of the Association of Licensed Automobile Manufacturers. At the meeting of the show committee held today it developed that the number of applications for space by exhibitors over previous shows was nearly 25 per cent. At last year's show there were more than 250 exhibitors, while up to the present time the secretary of the show has received more than 300 applications for space for which allotments already have been made.

A feature of the show this year, and one that will attract the attention of the followers of the bicycle, will be a complete exhibition of motor cycles. Thirty-one prominent manufacturers of motor cycles have been allotted space. In the exhibit will be displayed not only the best products of American manufacture but those of European make. The fact that the section allotted to motor cycles will be the same uniform decorative scheme that has been a feature of shows held in the garden differentiates it entirely from those of the old bicycle exhibitions.

New York, Sept. 4.—Special telegram—At the drawing at the Automobile Club of America today for space in the Grand Central palace show not allotted to the independent association those that secured the 3,000 feet left in the main floor were the Garford, Cleveland, Rainier, Prayer-Miller, Smith and Kisselcar makers.

CAN PUT TAGS ON POLES

Boston, Mass., Sept. 2.—The Massachusetts motorists have succeeded in getting by clever diplomacy a chance to put their guideboards on the telephone poles through the state. For a long time the telephone company has refused all overtures to allow anything to be tacked upon their poles, and with a state law to back them up no one has dared put even a small circular on the big sticks. However, through the efforts of ex-Congressman Powers, who is counsel for the telephone company, and a well known motorist, the company has given the state association authority to place on its poles such signs as it deems fit to warn tourists of conditions of the highway. So these signs will soon be put in operation. They will convey a warning to the tourists and as the poles are always close to the road the advantages of signs on them easily can be recognized. Instead of having them read "drive slowly," the signs in most cases where there is a turn or dangerous curve will read "drive carefully." Many motorists interpret the drive slowly notice to mean there is a trap and some of them whirl through it. The wording of the sign in the other manner will insure caution and should lessen accidents.

The Western News Company of Chicago
and Its Branches Supply Newsdealers

NH Van Sicklen, Manager

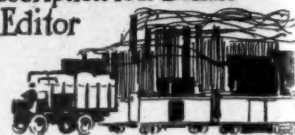


MOTOR AGE

1200 Michigan Avenue, Chicago
Published Every Thursday by the Trade-Press Company
Entered at the Chicago Postoffice as Second-Class Matter
New York Office 29 West Forty-Second Street

Subscription Two Dollars a Year, Foreign and
Canadian Subscription Four Dollars

Charles P. Root, Editor



MR. BILL PICKENS, PROMOTER



ALTHOUGH somewhat tardy, the action of the American Automobile Association in squelching Mr. Bill Pickens and others sailing under the flag of the United States Motor Racing Association is about the most welcome bit of news that motorists have heard for months. Furthermore there does not appear to be much danger from Mr. Bill Pickens in the very near future, for all sanctions that have been granted him—him is Mr. Bill Pickens and the said U. S. M. R. A.—have been withdrawn. Perhaps some of those who won prizes at meets under the management of Mr. Bill Pickens may never receive them, but they will know with what to contend in the future. The American Automobile Association and the public have heard much of Mr. Bill Pickens and there was no superabundance of good in the tales. Then to see that Mr. Bill Pickens does not operate under cover of some club, the American Automobile Association ruled that in the hereafter the club associating itself with a race meet promoter would be held responsible for the delivery of the prizes. This action was taken to prevent a recurrence of the Chicago and Long Island affairs. Praise to the American Automobile Association—if it sticks to its rule and doesn't whitewash Mr. Bill Pickens and let him into the game again. Mr. Bill Pickens is a good race meet promoter—for Bill.

WHERE RECKLESSNESS LEADS



MOTORPHOBES ought to be in a happy frame of mind; they see enough destruction of their enemies, the motorists, each week to satiate the most voracious appetite for gore. It would be nothing remarkably strange were they, the motorphobes, to argue that pretty soon the enemy will have destroyed itself, for is it not a fact that each week there is recorded many tales of reckless rushing to death in motor cars, and is not the list of calamities becoming alarmingly large?

There would appear to be some reason for some of the apparently rigid motor legislation, if for none other than protecting motorists, to say nothing of a non-motoring public, and if the self-destruction is to be maintained at anywhere near the present rate those who have been endeavoring to have moderate legislation take the place of that which is now considered rather drastic will see all their efforts pass for nothing.

There are thousands of motorists on the

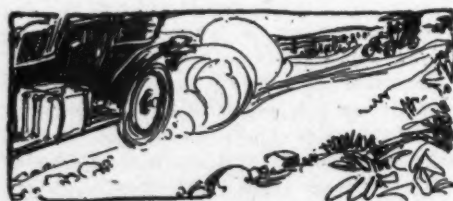
highways each day; there are good and bad, careful and careless, sane and insane. The good and the careful and the sane motorists simply go along without creating even a ripple and they are probably in the majority by a considerable number. The bad and the careless and the insane motorists, in the minority of course, can create enough trouble for the entire community—and they do so.

The fact that a man is rich, or is the head of some big business enterprise, or has a happy family, or is a decent person in all ways, may not take him outside of the sphere of the bad and the careless and the insane in so far as motoring is concerned, for most of those who meet death in motoring would appear to be more than comfortably well off in worldly goods.

Each week there is recorded more than one reckless act on the part of motorists, with the result of frightful injuries, even if some happen to escape death. The unknown road, the hidden corner, the burst tire, the disarranged steering gear, sometimes the drunken driver, are the excuses offered; there are always extenuating circumstances which may be suggested as measures of defense where a life is spared to permit any defense to be offered. As a matter of fact, 99 per cent of all the accidents that have occurred can be laid to badness, carelessness or insanity; the other 1 per cent might be laid to some mechanical defect, although this figure is believed to be pretty high.

Ordinary people, officials, legislators and others are not so blind as not to be able to discover that these accidents are not due to the motor car; they can see also that there would be no need for stiff regulations were these same bad, reckless and insane motorists eliminated from the field. Laws are not made to govern good and careful and sane people—they need no governing—but they have to submit to the restraint that is placed about the others whether they like it or not.

As the number of motorists increases, so also will the number of fatalities increase, and in the same proportion will the law set its hand down upon the liberty of all because of the recklessness of the few. And it is all a result of recklessness—or deviltry. There is no need for 95 per cent of the accidents that occur.



What is to be the result? Sooner or later it will be realized by the competent and decently inclined motorists that their rights have been curtailed because of the necessity of governing a few, and the competent and decent motorists will join hands and willingly support any movement that will lead to the rigid examination of all motorists before they are permitted to operate cars upon the highways. It may be the means of heading off a few sales, it is true, but it will be the means of permitting only good drivers to operate cars and the good drivers will be decent drivers or they will not be permitted to be drivers at all.

This is what will happen, unpleasant as it may appear and unwelcome as it will be to the motorist who has been good and careful and sane. There is no means by which the motoring organizations can prevent accidents which are a direct result of recklessness, and the maker is not responsible. There is about so much energy to be worked out of each man's system and he will take it out his own way so long as nobody attempts to stop him.

FREAKS NOT WANTED



MOTING America has no room for freaks; they are as ruthlessly crowded out as nature crowds out useless flowers, grasses, trees and shrubs, making room for the useful growths. History records the gradual extinction of species of animals whose existence ceased when their life value ended and they became a burden to nature. Similar truths are recorded regarding the evolution of plant life and in the gamut of human life those races that were once with them were gradually swept overboard when this ceased. So in the motoring sphere there is room only for the good, the feasible, the scientific and the necessary. The key to the present is found in the past and that car builder who sets blindly to work designing his machine without taking cognizance of what science has accomplished in the last century must sooner or later see his pet schemes buried beneath a torrent of condemnations. He may fool a few buyers for a few years, but it is not for long. The last 5 years have seen motor car factories rise, attempting flight on a freak machine, only to fall into ignominy. The stable builder today is that maker who instead of revolutionizing the industry studied the engineering trends, found what was correct, discarded the rest, and today has a construction that is the outcome of a decade or more of engineering research.



R EPORTS from a number of sections of the country indicate that the motor car trade for the season of 1907 has by no means ended and that even with 1908 cars in sight and in some cases ready for delivery there is still a good demand for the cars that were produced this year. In at least one instance a manufacturer is still behind in his 1907 deliveries; in another 1908 deliveries are being made. All of which illustrates the fact that the cars of two seasons are so blended as to make little actual difference to the purchaser. This is not the case everywhere, but it illustrates the fact that radical changes in design are not absolutely necessary each and every year.

M OTORISTS of Massachusetts do not propose to submit to the order of the authorities of the island of Nantucket prohibiting motor cars from even setting wheels on the island's sacred soil. The authorities have been defied and now the island's officers have been called upon to appear before the supreme court to show cause why they should not be permanently enjoined from enforcing their eviction order. The case will be tried upon its merits and motorists firmly believe a decision will be rendered which will permit motor cars to travel the island roads with as much freedom from interference as the owners of horse-drawn vehicles enjoy today.

THE WEEK IN BRIEF



Last big road race of year is run over Brescia circuit in two divisions, Minola in Isotta Fraschini winning first section run under emperor's cup rules and Cagno, in Itala, second one, in which grand prix regulations are used; resume shows Italy has made clean sweep this year.

American Automobile Association revises racing rules; suspends Pickens and Gaites and revokes sanctions granted United States Motor Racing Association.

Newspaper men are taken on junketing trip to Providence, R. I., by Arthur Jervis, where they visit Berlet factory and see new models.

Opposition to appointment of A. L. Pope as permanent receiver for Pope Mfg. Co. develops among Connecticut creditors of concern.


Hartford, Conn., tries experiment of oiling its streets; inhabitants well pleased with scheme.

Independents hold drawing for space in Grand Central palace show, Reo getting first choice.

Boston man makes a comedy out of efforts of Nantucket people to keep motor cars off island.

Third annual meeting of Automobile Clubs of Central Pennsylvania held at Melton, Pa. Relay 24-hour race not favored by New Yorkers and single car event is substituted.

C. V. Dasey and W. B. Felker are killed during 50-mile race at Overland park, Denver.



Automobile Races

LABOR DAY

COMPLIMENTARY—ADMIT ONE

H ERE is a sample of the close affiliation between the horse and the motor car in New England. The races supposedly were run by the Bay State A. A., but there was nothing on the tickets to show it. The club had a little to do with the affair, but the horsemen were responsible for it, just the same, which suggests that there is something in common between motorists and horsemen, even if it is only that which is common with all—money. It may be these horsemen really have a hankering for the motor car—who knows?

S HOWS have not petered out by any means. The independents made application for considerable more space than they could have and so must be content with a smaller exhibition than they hoped for as individuals. When the show doors have been opened in the palace and in the garden in New York and in the Coliseum in Chicago the general public will realize more than ever that the motor habit is not only growing but becoming more secure, and that any talk of a smash is simply rot. It will also be seen that the commercial vehicle part of the industry not only has grown, but has interested thousands of merchants all over the country who are only too anxious to be convinced that mechanical power ought to replace animal power in the transportation of merchandise from one part of a city to another.

M OTOR AGE believes the best proof that it was and is right in the matter of track racing is the double tragedy that occurred at the meet held in Denver Labor day. This is a most regrettable affair, for beyond taking the lives of two prominent motorists and saddening the homes of their relatives, it is unfortunate inasmuch as after this sacrifice the game will go on and other lives will be the cost. So long as there is no limit placed on the power that may be installed in racing cars, this destruction of life will continue. Whatever may be the outcome, Motor Age will be content with the knowledge that it never encouraged Death to take part in the motor game.

A CCORDING to the latest reports the Pope company owes about a million dollars, with no really big individual claims other than stock and possibly bond holders. While this is a large amount of money, certainly it is not so astonishingly great when the assets of the company are taken into consideration and it will be one of the trade wonders if it should happen that this corporation did not straighten out its affairs and rid itself of the receiver that has been placed in charge of the company's affairs. According to late reports the company is showing a profit as being run by the receiver, so it is reasonable to suppose that it can do so under the management of its own officers once it has straightened out its financial affairs and settled down to business.

F RANCE has been knocked off of its position of supremacy in the racing game. The last big race in Europe has been run and in all France has won two—both of which were for French cars only. It has not won an open event this season. Italy tops the heap, with Nazzaro in the lead with three firsts to his credit—and the three big ones, too—and Cagno and Minoia each one. England has won two, Germany one and Belgium two. As a matter of fact, Italy has shown the greatest strides not only in speed but in manufacture as well—and the end is not yet.

COMING MOTOR EVENTS



Motordome Meet—First meet of Morris Park Motordome Club at Morris Park, N. Y., September 6-7.

Pittsburg Meet—Pittsburg Automobile Club's meet at Brunot's Island, September 9-10.

Chicago Economy Test—Second annual economy test of the Chicago Motor Club and Chicago Automobile Trade Association, September 13.


St. Louis Reliability Run—Automobile Club of St. Louis, 90-mile reliability run for owners only, September 14.

Hartford Hill-Climb—First hill-climb of Hartford Automobile Club at Hartford, Conn., September 21.


A. C. C. Show—Automobile Club of America's annual show at Grand Central palace, New York, week of October 24-31.

New York Show—A. L. A. M. show, Madison Square garden, November 2-9, M. L. Downs, 7 East Forty-second street, New York.

Chicago Shows—Eighth annual Chicago show, Coliseum, and first commercial vehicle show at Seventh Regiment armory, both November 30 to December 7. S. A. Miles, manager, 7 East Forty-second street, New York.



THE READERS' CLEARING HOUSE



HORSEPOWER AGAIN

Duluth, Minn.—Editor Motor Age—Can you tell me how the estimated horsepower of a motor car engine is figured? Do the French makers figure the same as do those in this country?—W. S. B.

There are many ways to figure horsepower, as was stated in Motor Age of August 15. The subject was treated at some length by a correspondent in the issue of August 22. The formula adopted by the engineers of the Association of Licensed Automobile Manufacturers, which works out approximately correct, is as follows:

$$\frac{D^2 \times N}{2.5}$$

in which D is the diameter of the piston, N the number of cylinders and 2.5 a constant determined upon after tests made upon well-known American motors. The French have as many ways of figuring horsepower as the Americans and some of the rules are alike.

POINT IN DESIGN

Editor Motor Age—Please inform me through the Readers' Clearing House why makers prefer to operate overhead valves by the rocker arm system rather than by direct contact with an overhead camshaft.—G. N. F.

In a purely scientific sense either arrangement is permissible. The reason why the overhead rocker arm is commonly employed is that it is very much easier with this arrangement to dismount the cylinders, and there is no risk of replacing them with valve gears incorrectly timed.

USING PICRIC ACID

Cadwallader, Pa.—Editor Motor Age—Please advise me how much picric acid to use to a gallon of gasoline to get a stronger explosion with safety to an engine 3 by 3½ inches.—J. R. Herbertson.

If picric acid is used at all it is customary to employ as much as the gasoline will dissolve, which is only a small quantity. Picric acid has been found to have a corrosive effect on the valves, etc., and for that reason its use is not advised.

A PUMP-FED ENGINE

Chester, W. Va.—Editor Motor Age—I have been much interested in the series of articles by Victor Loughheed, especially in regard to carburation and means of cooling. I am building a small motor, in which I shall use a pump to supply the fuel, instead of using a carbureter. Can you tell me what diameter the flywheel should be, and the thickness of its rim, for a bore and stroke of 2½ inches? Also, what bore and stroke should the pump be for proper carburation of the air in the cylinder, allowing about ⅝ inch for clearance?—Elmer Hoskinson.

The question concerning flywheel size shows a slight misunderstanding of this detail of motor car design, in that the weight may be less if the diameter is greater. First you must decide upon the maximum diameter the condition will allow and then allow enough weight to give the required smoothness of rotation. This weight will vary in accordance with the compression, the normal speed, and many other factors, although it is widely considered that, for a single-cylinder motor, the energy stored by a flywheel at its average speed should be a little more than equal to the energy developed by the motor in one impulse. To calculate the centrifugal force, multiply the weight of the rim by the distance between its center of gravity and the center of rotation, by the number of revolutions made in a minute, by the decimal .00034. The volume swept by the piston of the engine, with ⅝-inch compression space, is 9.2039 cubic inches, for the proper carburation of which amount of air about 1-8,000 as much liquid gasoline, or .00115 cubic inches, is the most that will be required. This is the approximate capacity of a pump with ⅝-inch plunger making a 1-10-inch stroke, although other proportions, of course, could be used. It must be understood that, with a pump used to supply the fuel, the air as well as the fuel must be varied, or else control must be effected by varying the mixture proportions; and for the best results the latter system requires higher compression than you are planning to use, besides some means of scavenging out the residue of burned gases, left in the clearance at the end of each exhaust stroke.

ILLINOIS LICENSE NUMBERS

Paw Paw, Ill.—Editor Motor Age—Please answer in the Readers' Clearing House the following: A owns a car which has been registered in Illinois as No. 99. He purchases a new car of different make and sells No. 99 to B. Does A pay 50 cents for transferring the car to B and retain his original No. 99 for his new car and does B pay the regular \$2 fee or is it necessary for A to pay \$2 for a new license? What fund gets the benefit of the license fees in this state?—S. T. Beale.

Section 7 of the Illinois motor vehicle law reads as follows: "The vendor and purchaser of every motor vehicle which has been previously registered by any person, other than a manufacturer or dealer shall, within 10 days after such sale, join in a statement and send the same by mail to the secretary of state, together with a

filing fee of 50 cents, and thereupon said registration shall cease to apply to the motor vehicle so sold, and the purchaser of such motor vehicle shall register the same as in case of an original registration and another and different number than the original registration number shall be assigned to said motor vehicle by the secretary of state, and the person to whom said original registration number was first issued shall have the right to register any other motor vehicle owned by him as herein provided and have said original registration number assigned thereto at any time within 1 year thereafter. Said statement shall notify said secretary of state of the sale and of the name and address of the purchaser and the change of ownership shall be entered by the secretary of state upon his records."

MIXING TIRE SIZES

Santa Cruz, Cal.—Editor Motor Age—Please answer the following through the Readers' Clearing House. Is the inside diameter of a 30 by 3-inch casing the same as the inside diameter of a 30 by 4-inch casing, or will the outside diameter of a 30 by 3-inch casing be the same as the outside diameter of a 30 by 4-inch casing?—Wendell M. Hinds.

By no means are the sizes alike, in either case. There is an inch difference in the outside diameter of the casings and practically an inch difference between the two in the matter of the inside. A 3-inch tube might be used in a 4-inch casing, but a 4-inch tube could not be used in a 3-inch casing, for it would buckle and soon wear through. A 3-inch tube, after having been used in a 4-inch casing, could not be used in a 3-inch casing, for it would be stretched too much.

GASOLINE PROPORTIONS

Asheville, N. C.—Editor Motor Age—Kindly tell me how many cubic feet of gas 1 gallon of gasoline will generate; also the amount of gas 1 pound of bicarbide will generate.—Subscriber.

One gallon of gasoline will make approximately 1,215 cubic feet of explosive mixture in the proper proportions of air and gasoline vapor. One pound of calcium carbide, which is taken to be what is meant, will produce approximately 4½ cubic feet of pure acetylene gas.

ENGLISH PUBLICATIONS

Richibucto, N. B.—Editor Motor Age—Kindly give me through the columns of the Readers' Clearing House a list embracing some of the more prominent English motor car magazines.—H. O. L.

Autocar, 20 Tudor street, London, E. C.; Motoring Illustrated, 11 Arundel street, Strand, London, W. C.; Car, 168 Picadilly, London, W.; Motor, 7 Rosebury avenue, London, E. C.





LEGAL LIGHTS AND SIDE LIGHTS



MOTORPHOBE ARRESTED

For some time past touring parties stopping at hotels and garages in Hartford, Conn., have told of numerous punctures and other tire troubles between Hartford and New Haven. A few days ago a party driving from Sanford to Boston had eleven punctures between New Haven and Meriden, and most of them occurred at close intervals, which leads one to believe that an attempt had been and is being made to put tires out of business. W. H. Scoville encountered similar trouble in another section of the state, down in Chester, where the roads are smooth, and hard. Mr. Scoville was driving through the town of Chester and discovered that three of his tires had gone flat. He searched the immediate vicinity for the cause of the trouble and concealed under the dust he found two contrivances which would put any tire out of commission. In short, the weapons of destruction consisted of old scythe blades, chisels and other edged instruments secured to boards 8 inches long. They were so concealed that only the tips of the blades showed. Mr. Scoville brought the contrivances to Highway Commissioner MacDonald at the state capitol, who, in his 12 years of service never had seen the like before. He turned them over to State Superintendent of Police Eagan, who immediately detailed an officer to work up the case. Subsequently the culprit was apprehended and placed under a bond of \$100. The man has violated section 1177 of the general statutes which covers the willful throwing of foreign material in the roadway with malicious intent.

AFTER WOMEN SCORCHERS

Having captured all of the men scorchers possible, the Indianapolis police have now begun to run down women drivers with the police White steamer. The first woman victim was Mrs. Charles Buschmann, who was fined for driving at a speed of 22 miles an hour. Several other women have been arrested. In the majority of cases the police do not require the fair drivers to go to the police station, merely ordering them to appear in court on the following morning for a formal hearing.

NEW ENGLANDERS TO MEET

Motorists and road builders from all the New England states, New York, New Jersey and Pennsylvania, have been called together by the Springfield Automobile Club in Springfield, Mass., Tuesday and Wednesday, September 24 and 25, to consider good roads and legislation. According to preliminary plans, the convention will be held in some hotel or large hall. The club is counting on about 150 delegates. On Tuesday a discussion will be led by

chairmen of the various highway commissions represented, at the close of which the problem of legislation looking toward uniform motor laws and the sane use of highways will be considered. Tuesday evening a banquet will be held at which the delegates present will be guests of the Springfield Automobile Club. On Wednesday the visitors will be taken on a tour of the city in cars by the club members. The question of motor legislation will be given much attention and the Springfield Automobile Club has put itself on record as one of the first to advocate co-operation between the police and motorists for the purpose of observing the speed laws by the drivers. The club is giving this subject much consideration at its meetings and the opinion is universal that the only way to put a stop to the racing of motor cars on the public highways is to work with the authorities who are seeking to enforce the laws. The Springfield motorists at least realize that the great majority of motorists are as law-abiding as any other class of citizens and that the general outcry that has been raised against them is due to a few drivers who disregard both the laws and rights of others. In consequence of this they have pledged themselves to carry out this idea of co-operation with the police, and it is hoped that by this method the speed trap will soon be discarded, at least wherever a club is willing to stand unflinchingly by this principle. Another subject to be considered will be a change in the law relating to licenses. At present the law of the different states covering this point is usually radically different from that in adjoining states, and the result is the tourists are put to great inconvenience, and in some cases serious trouble, when they go from one state to another. For instance, a Massachusetts license and a New York license are not recognized in New Jersey and consequently when a tourist from either of the states named desires to cross the land famous as the home of the mosquito and the trust it is necessary to take out a new license for that particular state; on the other hand the motorist with the New Jersey license is free to travel anywhere in Massachusetts on his home license. In Pennsylvania a similar state of affairs exists. To get a license to run a motor car in that state it is necessary to send to the state house in Harrisburg, which means a delay of 4 days for the motorist who decides he would like to spend some of his money in Pennsylvania. As a result many who would like to cross the state in a motor car will not wait the

required time, and turn back or go around. Those who feel they must go into Pennsylvania and who have not sent ahead for a license must waste several days in a garage on the outskirts of the Keystone state. Here again the Pennsylvania license is good for a trip in either Massachusetts or New York, which is clearly unfair. It is expected Congressman Gillett will address the meeting on the question of national legislation for motorists and other prominent public men and club lawyers will talk along the same line. Many of the motorists will probably come over the road and bring their families, as one reason for picking this time for the convention was the fact that the Connecticut valley will be at the height of its beauty at the chosen date. The guests of the Springfield Automobile Club will include William E. McClintock, of the Massachusetts highway commission; Paul D. Sargent, state highway commissioner of Maine; A. W. Dean, state engineer of New Hampshire; J. W. Votey, state highway commissioner of Vermont; John H. Edwards, Rhode Island highway commission; John H. MacDonald, state highway commissioner of Connecticut; E. C. Hutchinson, commissioner of public roads of New Jersey; Joseph W. Hunter, highway commissioner of Pennsylvania; and State Engineer Skene, of New York. While only chairmen of the highway commissioners will be asked to lead the road discussion the other members of the commissions will be invited.

TWO LICENSES REVOKED

Two Massachusetts motorists have had not only their licenses to operate cars revoked but also the registration of their machines as well. One was charged with reckless driving and the other with driving while under the influence of liquor. The newly formed Safe Roads Association was responsible for both revocations and it has gone a step further by offering a reward of \$50 for any evidence that will show that any person attempts to drive a car under the numbers or registrations that have been revoked by the authorities.

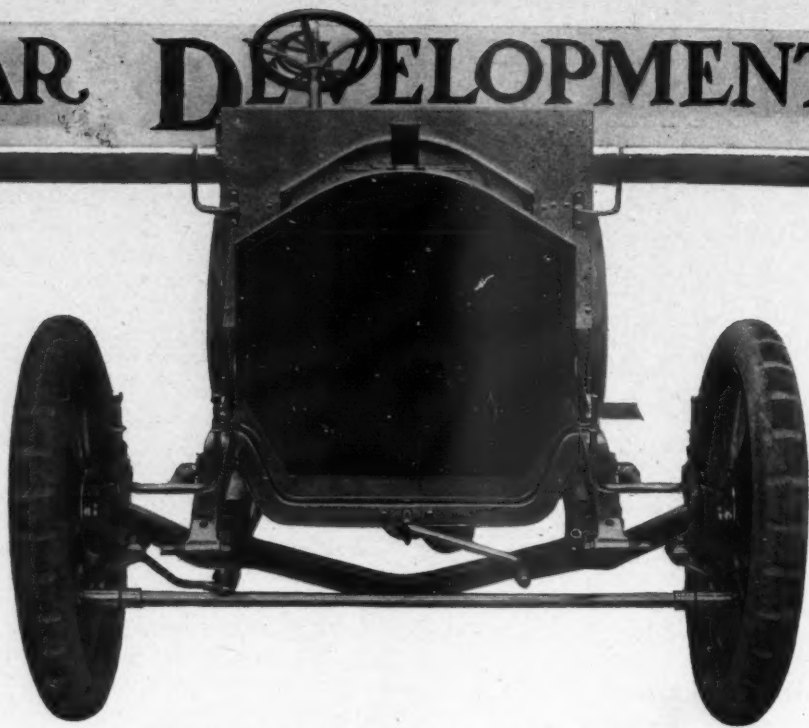
DID NOT SLOW DOWN

Madison, a shore town in Connecticut, is the first community to arrest a motorist for violation of the new state law which went into effect Monday of last week. Justice of the Peace Marsden fined one Albert Fuller \$20 for reckless driving, all of which aroused the indignation of the motorist. Fuller conducted his own case and was reminded that the new measure expressly provides that a motor car slow down when approaching another vehicle. Fuller admitted his technical guilt in this respect and paid the fine.



MOTOR CAR DEVELOPMENT

NOW that the six-cylinder wave has struck America and already a large percentage of American makers will include six-cylinder cars in their 1908 program, it may not be amiss to call attention to what might properly be termed the grandpa of the six-cylinder, namely the Napier six as constructed in three models by S. F. Edge, Ltd., 14 New Burlington street, London W. The six-cylinder Napier is but an infant in number of years, but quite a grandfather in relation to the other six-cylinder cars. The first Napier six came out in 1903 and every year since then has seen the production of an improved six, each succeeding model being but an evolution of the preceding ones, the 1907 chassis being the apex of the lot. Although originally built in small numbers, the Napier sixes are turned out now at the rate of eighteen per week, this output consisting of 40, 60 and 80-horsepower machines. The public is familiar with the performance of the Napier six since its appearance on the sands of Florida when, driven by McDonald, it made the 100 miles in 1 hour 15 minutes 40 2-5 seconds. The flexibility of the car was recently demonstrated by running it for 6 hours in London traffic on the high speed with the water never higher than 47 degrees below the boiling point. This same car, carrying four passengers, made a run of 200 miles on an average consumption of 1 gallon of gasoline for each 19 miles. It was one of these cars also that built without a transmission made the 1,000-mile return trip from London to Edinburgh, traveling as slowly as 4.4 miles per hour without slipping the clutch. Most remarkable of all is its world's 24-hour record of 1,581 miles 1,310 yards. In the present Napier factory, which covers acres

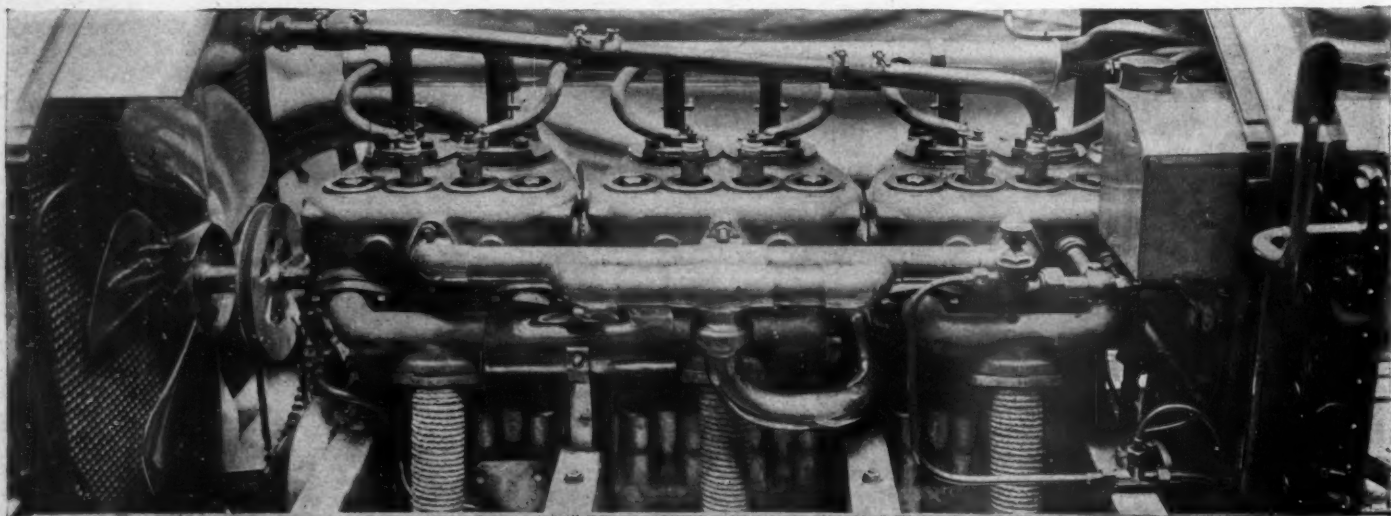


NAPIER FRONT AXLE WITH ITS PECULIAR CONTOUR AND ANGLES

of ground, 1,200 workmen are working on Napier six-cylinder cars of the gearless and gear style.

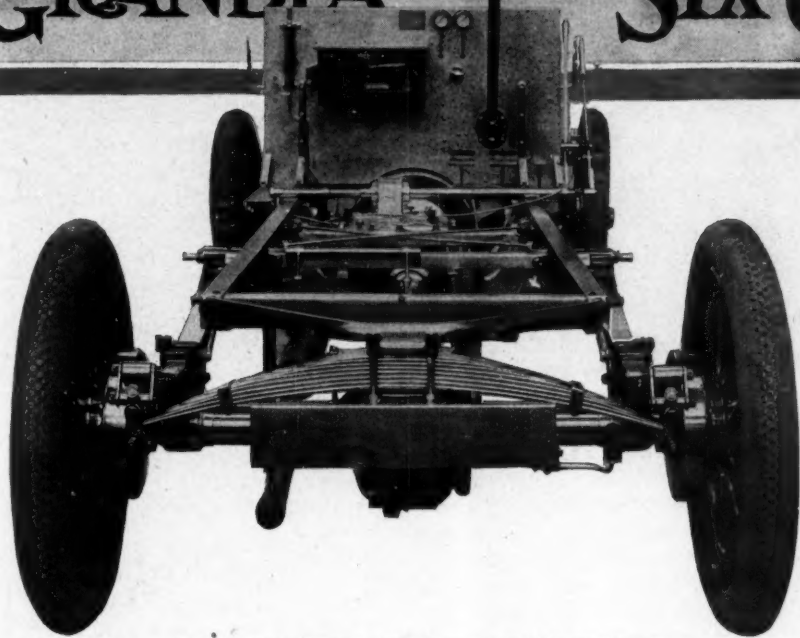
The 40, 60 and 80-horsepower Napier sixes have motors practically alike except for bore and stroke and other differences in the size of parts. The reader cannot overlook in these motors the casting of the cylinders in pairs with integral water jackets and valve cages and the carrying of all the interchangeable valves on the left side where they are opened through the medium of a camshaft enclosed within the crankcase, a construction very popular in this country. Instead of supporting the crankcase through two arms at each side, the Napier motor is held by four integral arms on the right and as many on the left. Half-time gears at the forward end are enclosed and operate in oil but a novelty is the driving of the water pump, carried between the motor

arms at the right of the front cylinder pair, by a chain from the end of the crankshaft. The six-throw crankshaft is made with three pairs of cranks at 120 degrees apart. It is of steel machined from the solid forging and formed with large bearing surface for plain bearings. The lubrication system includes a receptacle placed in the lower half of the crank chamber and a geared oil pump, which, driven off the half-time gears, draws the oil from this receptacle and delivers it to a specially designed filter, accessibly placed on one of the crankcase brackets. From this it flows to the crankshaft's bearings and then returns to the oil receptacle. From other deliveries oil is served on to the walls of the cylinders whence it drops into a small dip tray formed in the casing. A lip on each end bearing catches the overflow from this tray. While lubricating the bearing itself it throws oil in



NAPIER SIX—THE CARBURETER IS CARRIED ON THE RIGHT AND INTAKE PIPING ON THE LEFT

GRANDPA OF THE SIX-CYLINDERS



NAPIER REAR SPRING SUSPENSION AND FRAME DESIGN

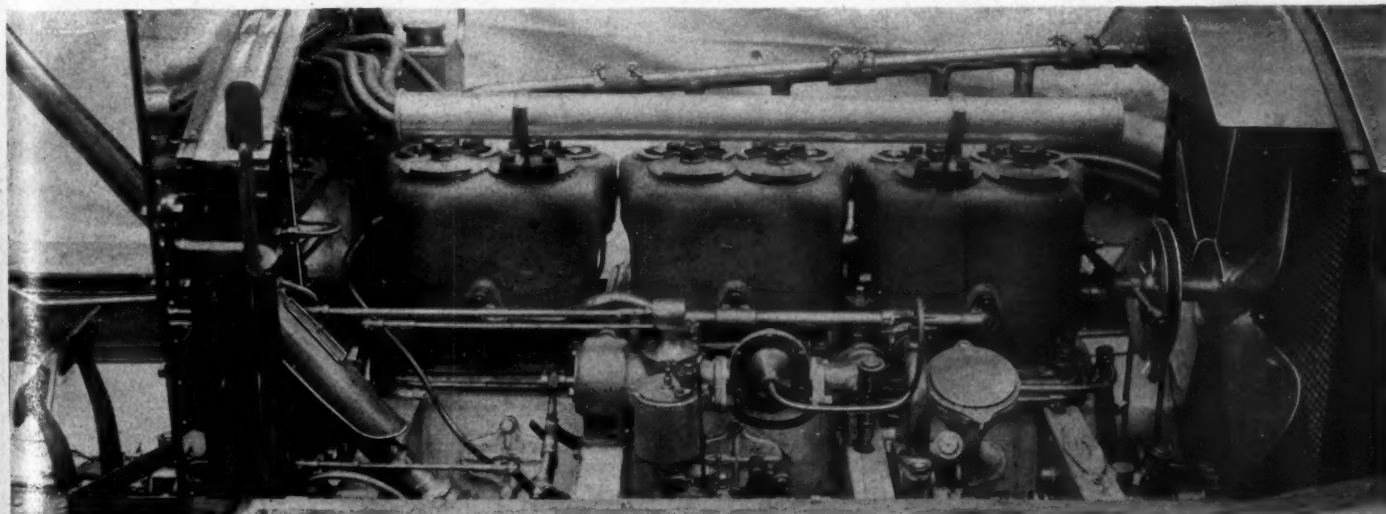
sufficient quantities upward to lubricate the wrist pin bearings. A strainer filler is placed conveniently for refilling the oil receptacle in the crankcase, and by the use of a lever an overflow trap is opened so that the proper quantity of oil in the receptacle cannot be exceeded. An automatic relief valve, set to return oil direct to the suction side of the pump, forms a part of the apparatus which necessitates an unvarying quantity of oil at all times being circulated over all of the bearing surfaces irrespective of the speed at which the engine is traveling.

The carbureter is of the Napier type, having a throttle actuated by governors which can be cut out by the accelerator. There is also a throttle actuated by a lever on the steering wheel. The Napier patent hydraulic air regulator used on it lies between and connects the carbureter and the hot air intake pipe. It is so

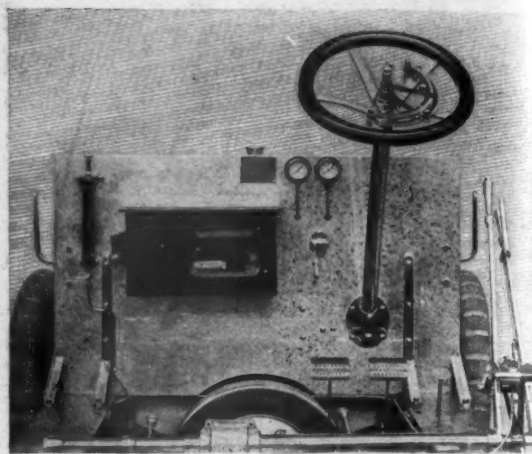
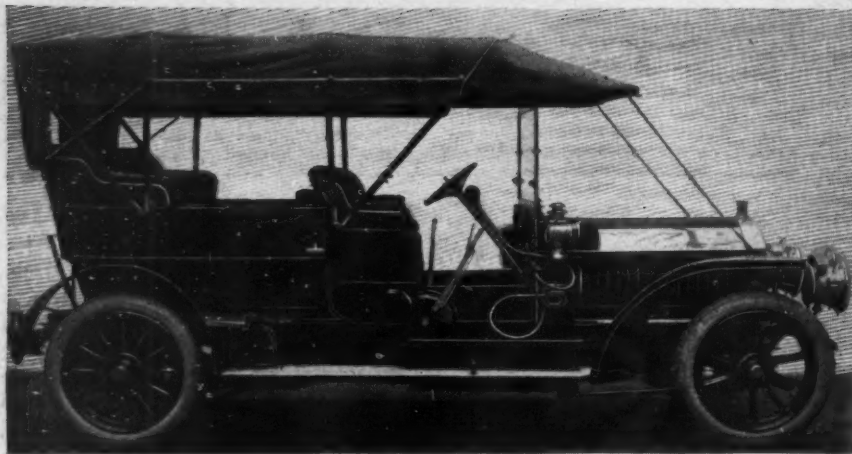
arranged that the amount of air passing the valve is directly proportional to the speed of the engine, and the ease of starting is in great measure due to the manner in which this automatic regulator does its work. When the speed of the engine gets low this valve automatically shuts off the amount of air in proportion to the speed and the suction of the engine. The mixture is thus correctly maintained automatically, the result being that the last charges taken into the cylinders immediately before the engine stops are just as good and quite as explosive as any taken when running the engine, say, at 1,000 revolutions per minute. When the engine has next to be started this greatly facilitates matters, for the cylinders are charged with a mixture and merely waiting for the spark to explode it. The principle of the hydraulic air regulator consists essentially of making direct use

of the variations in pressure in the water circulation due to the different speeds of the engine. The pressure of the water acts on a diaphragm made of rubber and canvas. This diaphragm carries the small stud, which slides in and out of the casing of the regulator and actuates a lever attached to a butterfly valve arranged in the line of the air pipe. When fully out, as far as the water can press it, the air valve is fully open, so the stud is pushed back again into the casing by the force of the spring of the regulator and the valve is shut. Positions between these two extremes give a nicety of adjustment, which ensures the correct mixture at all speeds. An extra cold air inlet is placed over the jet, this inlet being controlled by a lever on the dash, allowing the driver to vary it at will. The carbureter tickler also is connected to a convenient lever. Closely associated with the carbureter is the double induction pipe consisting of a long horizontal pipe close to the valve chambers with a connection to each cylinder pair. The carbureter does not feed direct into this pipe, but through a short parallel pipe which delivers to the main pipe at two points—opposite the spaces between the first and center, and center and third cylinder pairs.

A characteristic Napier feature on all of the sixes is the synchronized high-tension ignition in which current is taken from a storage cell instead of a magneto. The synchronizing feature consists in the using of one coil and one low-tension contact maker together with a high-tension distributor which is synchronized with the low-tension contact maker. The result of this system is that the timing of all four cylinders is identical, that is, any one cylinder gets its spark at the exact piston



NAPIER MOTOR—CARBURETER WITH ITS WATER GOVERNOR AND CHAIN-DRIVEN WATER PUMP ARE ON THE RIGHT SIDE



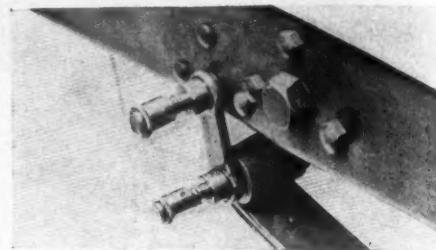
THE NAPIER SIX WITH CAPE TOP WITH EXTENSION AND REAR VIEW OF CAR'S DASH

location the remaining five do, there being no variance due to differences of coil adjustment or vibrator tension. The low-tension contact maker and the high-tension distributor are carried on a vertical shaft driven by skew gears off the end of the crankshaft. This shaft is in two parts connected by a sleeve with a spiral chase on its inner surface. The upper portion of the shaft is furnished with a stud meshing with the chase. The vertical movement of the sleeve connecting the upper and lower portions of the shaft obviously has the effect of rotating the upper portion about its own center to left or right with the result that the make-and-break disk and the distributor ring, which are driven by this shaft, are given a lead or a lag independently of their ordinary rotation and so the ignition is

advanced or retarded, as is desirable.

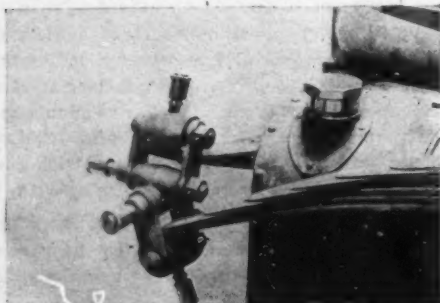
Two types of clutches are fitted—the cone metal-to-metal clutch and the Napier disk clutch. In the former type a certain amount of oil is poured into the clutch, which keeps the faces lubricated and thus prevents the clutch engaging too fiercely, as the oil has to be squeezed into grooves cut for the purpose before the clutch grips. The Napier disk clutch consists of a series of disks held alternately by the shaft and the clutch box, the gripping of the two sets of disks affecting the drive. This clutch box also has a quantity of lubricant put into it, and the clutch is very flexible in its action, permitting of considerable slipping when required, without undue heating. By means of a double leverage device these clutches can be manipulated with a very light pressure on the pedal, obviating the strain and tiring effect of pressing against heavy clutch springs.

Although Napier sixes are manufactured in small numbers without gear-boxes the average buyer prefers this device and to satisfy this desire the company supplies a selective gearset having gears for three forward variations and one reverse with direct drive on the high speed at which the countershaft with its gears is idle and all other gears in the set are out of mesh.



NAPIER FRONT SPRING SHACKLE

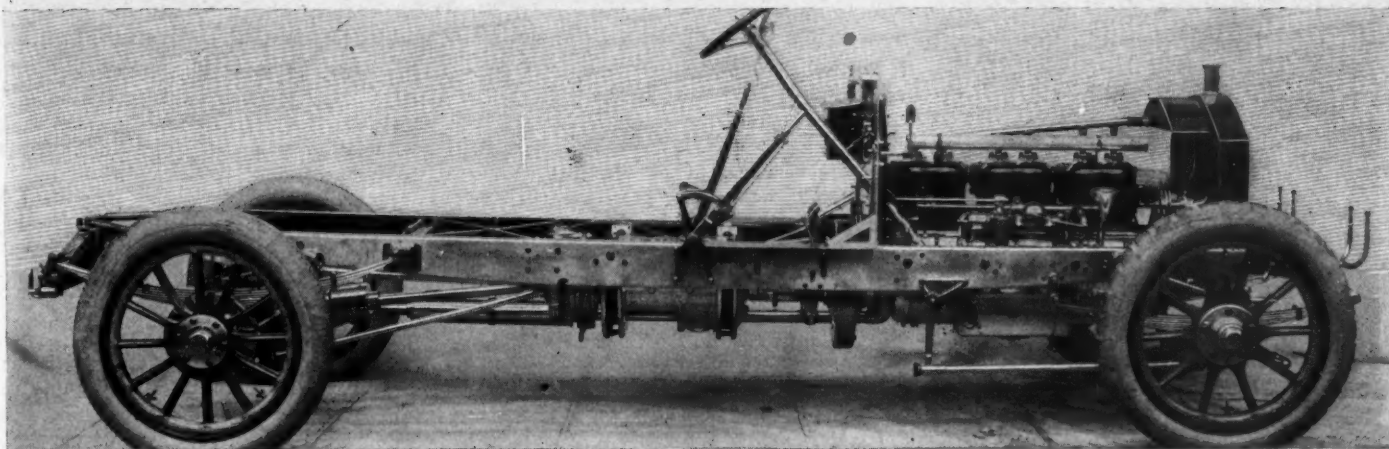
The Napier gearset has several characteristic features, chief of which is the carrying of the mainshaft as well as the countershaft on three races of annular ball bearings, one race at each end and another practically in the center of the shaft. For the forward speeds but six gears are needed—three on the mainshaft and three corresponding gears on the countershaft, carried to the side of the mainshaft. On the mainshaft are two sliding units, one for direct speed which locks with the gear on the clutch shaft by dental faced teeth and which is used for intermediate, and the other a sliding unit for low speed and reverse. The throwing of the countershaft out of running on direct drive is accomplished by having the master gear on it mounted slidably, together with a lever interconnection so when the sliding gear on the



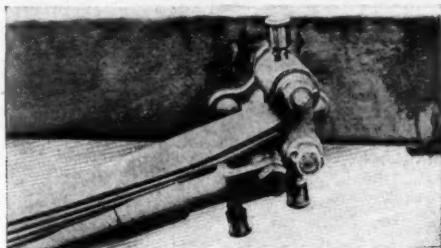
NAPIER REAR SPRING SHACKLE



EIGHTEEN NAPIER SIXES ARE ASSEMBLED EACH WEEK BY THE 1,200 EMPLOYEES OF THE COMPANY



RIGHT SIDE OF THE NAPIER SIX CHASSIS SHOWING HEAVY FRAME SIDE PIECES AND MACHINERY



FRONT SHACKLE REAR SPRING

mainshaft is moved forward to lock with the gear on the clutch shaft a lever carries the sliding gear on the countershaft out of mesh with the clutchshaft gear. The gearset is carried in a two-part aluminum case, the top of which is entirely open and covered by light plates.

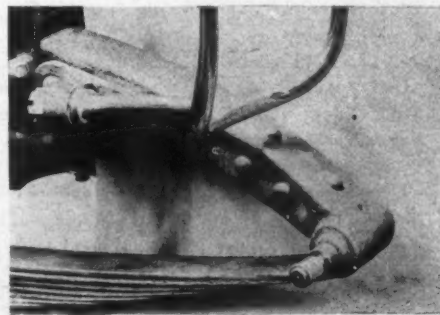
Transmission from the gearset to the back axle in the 40-horsepower car is by chains or drive shaft, but in the 60 and 80-horsepower machines by drive shaft only. There are two sets of brakes, one operated by the pedal and acting upon the countershaft, or cardan shaft, as the case may be, and consisting of a metal-to-metal type of drum brake. A side lever operates two internal expanding type metal-to-metal brakes on the back wheels through a special compensating arrangement to ensure an equal pressure with each brake. To prevent a car running

backward when stopped on a hill a ratchet sprag is arranged in conjunction with the foot brake drum situated just behind the gearbox. The pawl can be brought into engagement with the teeth of the ratchet wheel and it is so fulcrumed to the main frame. This brake is adjustable by a swing nut which dispenses with the use of special tools.

All the details of the running gear for the three sixes have apparently been carefully worked out. Especially is this so in the steering gear, in which all of the parts are so interlocked that one has to start at one end to take down the steering rods, connecting arms and other parts. Every nut is fitted with a split pin or other locking device. The box enclosing the rack and quadrant gear is bolted direct to the side of the frame and there is an additional bearing for the steering column in the dash. Ball and socket joints are fitted throughout and the connecting link is placed in front of the axle so that it is in tension under load. Ignition and throttle controlling levers are placed on the steering wheel. Each end of the front axle is a vertical hub which fits within the jaw on the steering pivot. Front springs are semi-elliptic provided with bushed eyeholes and each fitted with a compression grease cup. In the rear is a three-point suspension consisting of two

long side springs with a transverse member placed well in back of car. Compression oil cups are placed on each spring and shackle bolt and each eyehole is bushed. The frame is a pressed steel construction. Ball bearings are used throughout except in the motor.

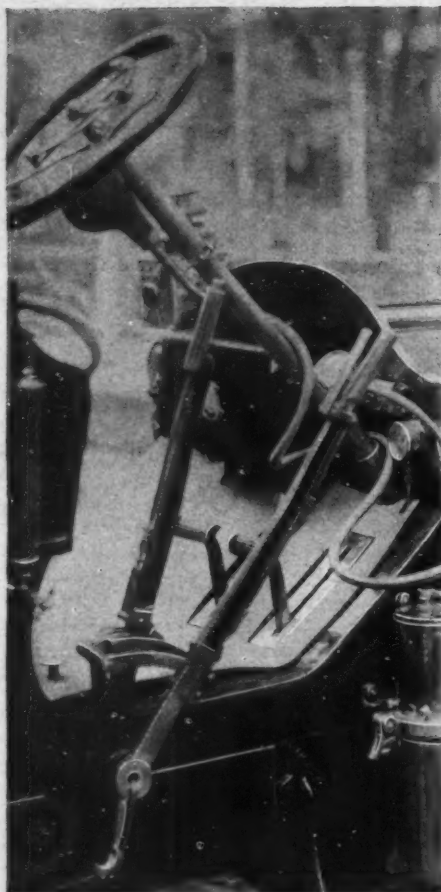
A refinement peculiar to all six-cylinder Napier cars is the solid aluminum dashboard, which has claimed advantages over the wooden or painted ones. This aluminum dash is easily cleaned, cannot warp, is not affected by heat, grease or weather and always looks smart, it is claimed. Napier bodies are essentially of the straight-line variety, a style much appreciated by the Britisher, who prefers simplicity and finish. At first sight the hood looks too long, particularly if viewed from a straight broadside, but if surveyed



FRONT END OF FRONT SPRING



ENGINE ASSEMBLY ROOM WHERE NAPIER SIXES ARE MADE AND PREPARED FOR THEIR WORK



CONTINENTAL CAR'S CONTROL PARTS

in conjunction with the entire car much of this apparent elongation vanishes. All finishings are finished in nickel instead of brass, which gives the car a pronouncedly distinctive appearance.

CONTINENTAL IN THREE MODELS

On March 1, 1907, there was incorporated under the Connecticut laws the Continental Automobile Mfg. Co., which concern has since that time been engaged in the manufacture of three models of Continental cars, a six-passenger touring car, a physician's roadster and a semi-racing car. The company is organized with a capital stock of \$100,000, fully paid in, and already has completed a factory building at New Haven, Conn. It is L-shape, each wing being 200 feet long and 65 feet wide. The building is three stories in height, made throughout of fireproof construction and is supplied with modern motor car machinery. The Continental cars have participated in many of the eastern sporting events during the past season and a Continental roadster was a competitor for the Hower trophy in the recent Glidden tour, being eliminated owing to the driver's arrest at Richmond, Ind., for speeding and the subsequent collision of the car with a trolley in Dayton, O.

Of the three models, the model C touring car, 40 horsepower, with $4\frac{1}{2}$ by 5-inch cylinders, 120-inch wheelbase, 34 by 4-inch wheels and six-passenger body is the one receiving the greatest attention for 1908

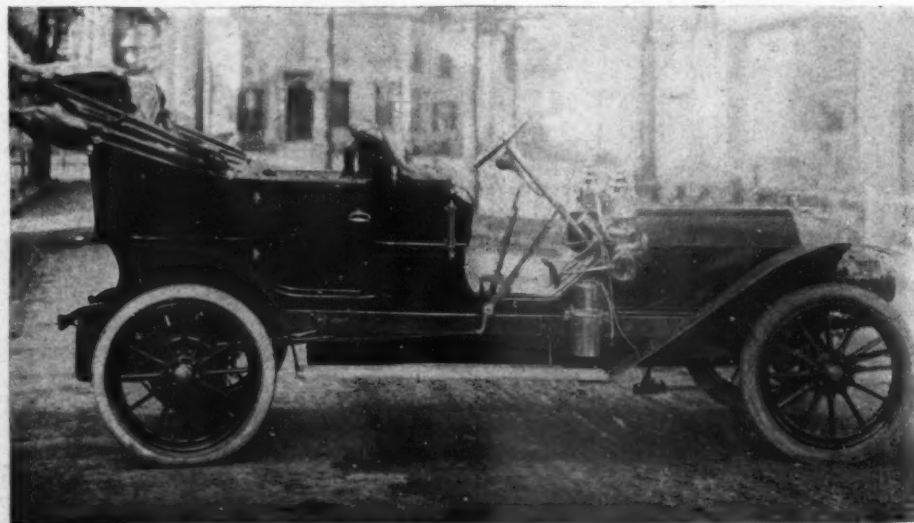
at the factory, although the other two models will be manufactured in numbers proportionate with the demand for such vehicles. The four-cylinder motor has separately-cast cylinders, with valves carried on one side and opened by direct lift from one camshaft carried within the crankcase. Half-time gears are enclosed and operate in oil. In finishing the interiors of the cylinders the grinding process is followed by the imparting to the walls of a high polish; connecting rods, half-time and other gears and all the valves are nickel steel constructions ground to a finish and hardened. Ignition current flows from either a storage cell or a reserve of six dry cells, passing through a four-unit coil and timer, carried on the top of the vertical shaft in the rear of the fourth cylinder before reaching the spark plugs, which are located in the caps of the intake valves. Lubrication is by a mechanical oiler located under the bonnet at the right rear of the motor and driven by belt from the timershaft. On the dash are sight feeds. Cooling is by honeycomb radiator, assisted by a centrifugal pump and a fan in the rear of the radiator. Water connections are standard throughout.

Carried in the flywheel is a five-ring clutch, consisting of two alternating sets of rings or disks—one of two disks, the other of three. The two disks of one set, which alternate with three of the other set, carry cork inserts to ease engagement, which is by a heavy coil spring surrounding the shaft. Speed variations are had through a three-speed and reverse selective gearset, giving direct drive on the high speed. Compactness and lightness of weight are the merits of this change speed mechanism in that the aluminum housing containing it is very small. The entire set weighs but 50 pounds. Gears and shafts are of special steel and Hess-Bright bearings are fitted throughout. Communicating from this gearset to the rear axle is a driveshaft with universal joints. Timken roller bearings carry the rear axle which is the standard construction.

Special care has been bestowed on the brake equipment of this vehicle, no fewer than five brakes being fitted—four on the rear wheels and one on the transmission-shaft, at the rear of the gearset. The transmission brake is applied by the clutch pedal; one pair of the rear wheel brakes is applied by pedal and is for regular use; the other pair of rear wheel brakes, for emergencies only, is applied by side lever. This lever is carried outside of the change speed lever, the latter operating in a conventional H-slot quadrant.

Nothing out of the ordinary or a departure from conventional construction appears in the chassis and running gear. The frame is a nickel steel construction with channel side members straight from end to end and tied together by channel crosspieces with gusset plates for reinforcement. Carrying the motor and gearbox is a pair of longitudinal channel subframe members supported on the drop crosspieces on the mainframe. The forward axle, of I-beam construction, has the tie rod connecting the steering knuckles in the rear of it and has the Elliott type of jaw endings for taking the vertical hubs of the wheel spindles. Steering is by worm and sector gear and on the steering wheel are spark and throttle control. Semi-elliptic springs carry the body at the four corners. In this car the motor is hung well in the rear of the front axle, thereby placing the entire weight of the chassis mechanism between the axles.

Regarding the other Continental models, each differs materially from the touring car in that the cylinders are cast in pairs and have valves located on the left side as shown by the chassis illustration herewith. The model A physician's roadster, rated at 25-horsepower, has cylinders with $4\frac{1}{4}$ -inch bore and $4\frac{3}{4}$ -inch stroke. The car has a 100-inch wheelbase, 34 by 4-inch wheels and in general chassis details is identical with the touring car using five-ring clutch, selective gearset and ignition, oiling and cooling systems. This car as shown this season has regular passenger accommodation for two and the disappear-



THE 1908 FOUR-CYLINDER CONTINENTAL CAR



HIGH-WHEELED RUNABOUT OF COLUMBUS BUGGY CO.

ing seat in the rear deck compartment which may be used if needed. The model B semi-racer is a high-powered machine with a motor rating of 35 horsepower, its cylinders measuring $4\frac{1}{2}$ inches in diameter and with $5\frac{1}{2}$ -inch stroke. This car has a 112-inch wheelbase. Its body design differs from that of Model A in that it is fitted with the conventional roadster rumble seat on the rear deck.

COLUMBUS BUGGY RUNABOUT

The Columbus Buggy Co., Columbus, O., manufacturer of electric vehicles, placed on the market the early part of the summer a gasoline runabout of the buggy type, which vehicle is illustrated herewith. The 10-horsepower, air-cooled, two-cylinder motor is carried on the subframe beneath the car seat where it is easily inspected. The air-cooling principles used in this motor are standard in every respect, and before placing the car on the market it was given a severe test in which it carried two people for 5 consecutive days, traveling over 600 miles and on the last day made a run from Columbus, O., to Indianapolis, Ind., a little over 200 miles, in 13 hours 47 minutes, consuming a little less than 8 gallons of gasoline on the run. During the 5 days of the test the motor consumed less than 3 pints of oil. On this run the motor was in operation continuously for $17\frac{1}{2}$ hours. The oiling system is from one large oil cup attached to the engine and which automatically lubricates all of the bearings. The transmission affords three forward and three reverse speeds, the maximum 25 miles per hour, second speed $12\frac{1}{2}$ miles per hour and slow speed a walking pace. Transmission from the countershaft of the car is by rope, one to each rear wheel. Wheels measure 44 inches in diameter and carry solid rubber tires. The wheelbase is 72 inches, tread $56\frac{1}{2}$ inches, clearance 22 inches, full-elliptic springs are used in front and rear and braking is by pedal, which brings a braking action on the countershaft. Steering is by side lever on the left with control parts accessibly mounted around the steer-

ing lever. In all other respects the car conforms to the many disciples of the Holsman which must properly be considered the father of the high-wheel car.

MOTOR CAR LITERATURE

The Pittsburg consulate of the American Motor League has published a booklet entitled "The National Highway and Connecting Roads," which contains over a dozen pages of road directions and detail directions and distances for the following routes: Pittsburg to Washington by way of Sodom; Pittsburg to Washington by way of Bridgeville; East Liberty to Brownsville by way of Library; Pittsburg to Uniontown through Mount Pleasant; Washington, Pa., to St. Louis, Mo.; the National Highway with places, distances and directions through towns en route; Cumberland to Bedford; Hagerstown, Md., to Harrisburg, Pa.; Hagerstown, Md., to Gettysburg; Hagerstown, Md., to Frederick, Md.; Frederick, Md., to Gettysburg; Frederick, Md., to Harper's Ferry; Hagerstown, Md., to Martinsburg, W. Va.; Chambersburg to Philadelphia; Hagerstown, Md., to Winchester, Va.; the Shenandoah valley; Staunton to Jamestown; Staunton to Natural Bridge, and New Market to Luray. Accompanying the booklet is an official American Motor League map of the road from Philadelphia to Pittsburg.

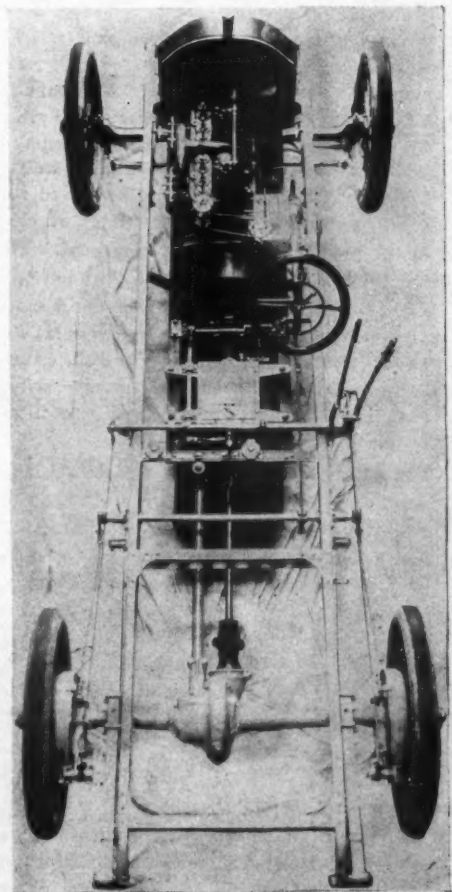
"A Pictorial Story of the Rambler Factory," an 8 by 10-inch de luxe edition, contains upward of 100 half-tone illustrations showing the various departments of the Rambler factory. As a centerpiece is used a bird's-eye view of the factory. The illustrations are artistically arranged on successive pages and brief reading matter is arranged around them. The booklet is one of the most comprehensive of its kind yet brought out in that every part of the factory is illustrated and in that many of the illustrations are very large. White page paper is used with red ink for the text and a light shade of brown for the illustrations.

"The Truth About the Automobile," from the Cadillac company, tells in sixty-

six pages what it costs to operate Cadillac runabouts. The first twenty pages contain a general dissertation on car upkeep; covering gasoline consumption, car troubles and the many other things that enter into car upkeep. The remainder of the book is filled with letters from Cadillac owners in which many of them give the cost per day of the car for oil, gasoline, tires and repairs, and also compare this cost with that of keeping horses. The booklet is very useful to those contemplating buying motor cars because of their relative cost of upkeep.

Henry Hess, of the Hess-Bright Mfg. Co., Philadelphia, is circulating in booklet form his paper on motor car change speed gearsets and their journals, which was read before the Society of Automobile Engineers at New York last January. Filling the twenty-four pages of the booklet are eleven pages of the paper, four pages illustrating Hess-Bright bearings fitted to different styles of gearsets and seven pages illustrative of the position of these bearings in different makes of cars.

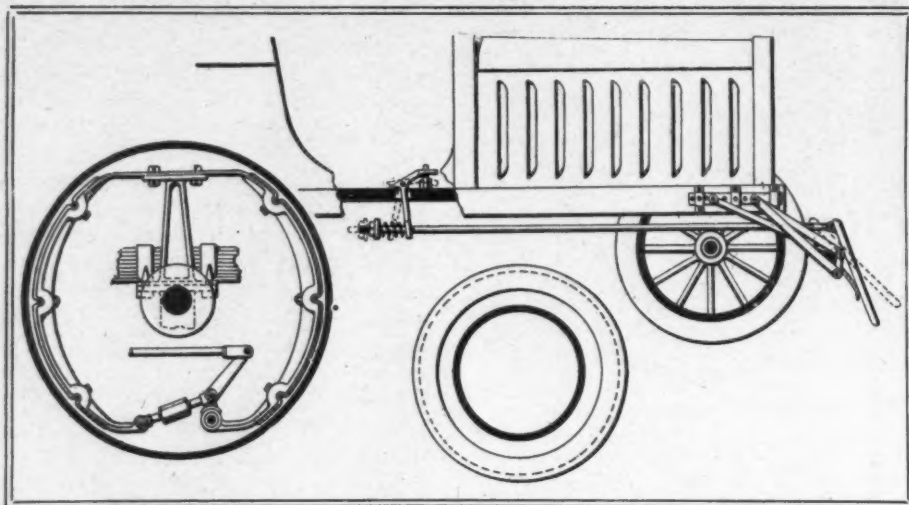
Volume 1, No. 1, of the American Magazine of Aeronautics, published in New York city, is a fifty-page magazine-size journal containing stories on the aeronautic conditions at the Jamestown exposition, the theory of ballooning and others on ballooning conditions in the various parts of America. It contains a good review of the aerial situation at the present time and is an up-to-date journal in every detail.



TOP VIEW CONTINENTAL CHASSIS



CURRENT MOTOR CAR PATENTS



DOUGLAS' BRAKE

GREY'S GASKET

WISE'S FENDER

Motor Car Truck—No. 864,680, dated August 27; to T. Neville and H. A. Thayer, Oshkosh, Wis.—This patent refers to a truck on which a motor car can be mounted and moved to any part of a garage or salesroom. The truck has a pair of tread boards spaced apart the width of the car tread and in each tread board is a groove for receiving the car wheels. Chuck blocks are attached, and each tread board is carried on a couple of uprights with small wheels.

Expanding Brake Band—No. 864,625, dated August 27; to W. H. Douglas, Belleville, N. J.—This brake band is intended to expand within the rim of a brake wheel on the countershaft or within a drum on the road wheel of a car. The expanding band is fitted at its center on a fixed support and the two ends free, both of them moving when the band is expanded. This band has a fabric covering, the cover being clamped on to the surface by a series of spaced bolts placed in recesses at the band, the fabric passing beneath these bolts and the bolts sufficiently recessed so that they do not contact with the brake drum or brake wheel.

Yielding Gasket—No. 864,419, dated August 27; to H. E. Grey, Philadelphia, Pa.—This gasket comprises a non-metallic body member and a metallic binder member, the latter overlapping the edges of the body member and presenting a continuous metallic and non-metallic surface upon each side of the gasket, these surfaces extending the full radial width of the gasket.

Concentric Carbureter—No. 864,687, dated August 27; to C. R. Radcliffe, New York, N. Y.—The carbureter referred to in this patent is made with an annular float chamber, a chambered discharge pipe connecting with the cylinders and a perforated partition at the side of the mixing chamber. A controller gate is fitted which co-

operates with the perforated partition to open and close the passages therethrough. A movable funnel-shaped controller co-operates with the gate, it having a passage through the same, this passage being located over the nozzle. A portion of the funnel co-operates with the gate to provide a variable air passage around the funnel and between it and the gate. Means are provided to move the funnel toward the gate to reduce the size of the passage and movement in the opposite direction being produced by the inrush of the air.

Motor Car Fender—No. 861,624, dated July 30; to B. P. Wise, Akron, O.—This fender placed crosswise in front of the car is intended to prevent the car running over persons or animals that get in the way as well as protecting the forward end of the car. The fender is a guard pivotally mounted across the front of the car and controlled by a pedal in the car floor by which it may be extended forwardly. The guard is attached to the sides of the body by means of a plurality of brackets with a horizontal bar slidably mounted in these brackets and means carried by one

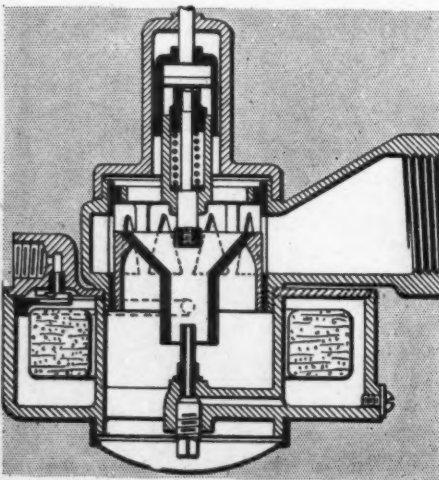
of the brackets for securing the bar in an adjusted position. Buffer springs are used. This fender, besides being a safety for the public, protects the car against being backed into by careless drivers as well as prevents running into garage door jambs and walls, thus preventing the lamps from damage. The fender is equipped with strong springs so that any jar may be broken; it is adjustable in height for rough country roads and so attached as not to interfere with cranking the car.

Motor Car Bonnet—No. 864,702, dated August 27; to J. Sherwin, Cleveland, O.—This bonnet or hood for covering the motor of a car consists of a metallic casing having an insulated material applied to and completely covering its inner surface, this insulating material being an asbestos lining which prevents the cracking of the enamel or paint on the bonnet.

Spark Plug—No. 864,709, dated August 27; to J. F. Thomas and H. J. Bolinski, New London, Wis.—This is an air-cooled spark plug in that the casing which threads into the cylinder head is made with seven circular flanges, much the same as an air-cooled engine. Further cooling arrangements are furnished by leaving a space between the inner wall of the casing and the insulation and filling this with a cooling compound.

Sliding Key Gearset—No. 858,058, dated June 25; to P. A. Bredsvold, St. Louis, Mo.—Combined in this gearset are three shafts, two of which placed end to end constitute the mainshaft of the set and the other paralleling them is termed the countershaft. On one of the halves of the mainshaft is a set of three gears loosely mounted thereon and constantly in mesh with corresponding gears on the countershaft. On the other end of the countershaft is a gear constantly meshing with a gear on the second half of the mainshaft. The three gears on the first half of the mainshaft carry recessed hubs so that a couple of sliding keys carried within the shaft, and constantly pressed outward at their free end by a spring, enter these recesses, locking the respective gears to the shaft.

Combined Pump Radiator—No. 863,337, dated August 13; to A. B. Welch and F. S. Welch, Pontiac, Mich.—This patent refers to the combined radiator and pump system in use on the Welch touring cars. The tubular radiator is enclosed in a framework within which is a hollow casting communicated throughout its length by means of water tubes. In this hollow casting is placed the water pump, it being so located that the water is drawn through one portion of the radiator tubes and propelled through the remaining portion by means of the pump.



RADCLIFFE'S CONCENTRIC CARBURETER



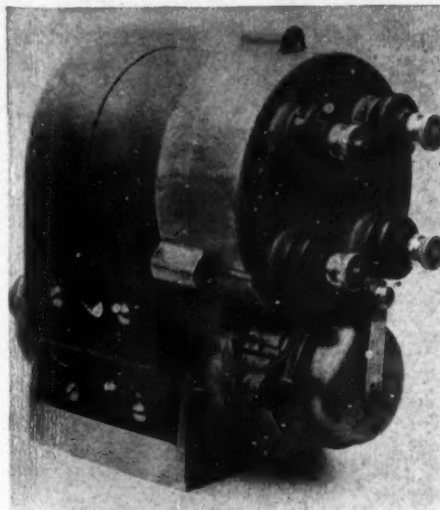
DEVELOPMENT BRIEFS



Another of the old-time American electrical manufacturers has come to the aid of the motorist in his ignition field by the use of a high-tension magneto, one of those instruments in which the low-tension current is generated, as well as a high-tension induced current. This high-tension current is delivered to the four spark plugs by a distributor incorporated in the magneto itself. This magneto styled Komet, manufactured by the Dow Portable electric Co., Braintree, Mass., has been before the motoring public during the last summer. In the half-tone illustration on this page the two permanent horseshoe magnets on the instrument are seen as are the four terminals on the end of the large cylindrical part of the instrument. The lower cylindrical portion contains the commutating portions for the primary circuit. Before detailing the construction of this magneto Motor Age readers must bear in mind that a high-tension magneto differs from a low-tension magneto in that there are two windings, one a primary or low-tension winding, the other a secondary or high-tension. These windings are in relative relation to each other as follows: Wrap a few turns of coarse thread endwise over an oblong block of wood a few inches long and with its sides recessed to contain the winding, call this the primary winding; over this primary winding wrap fine silk thread with a great many turns many times that of the primary winding; this is the secondary winding. In the magneto each is a separate circuit absolutely insulated from the other. The primary winding is on what is called the armature core and as the armature revolves between the poles of the permanent magnet a current is set up in this winding, there being arrangements connected with this winding to make and break the current. This making and breaking of the current in the primary winding sets up a flow of current in the secondary winding which is termed an induced current. This induced current is of high voltage, a voltage sufficient to bridge a gap in any spark plug and ignite the mixture in the cylinder. Because of this it is termed a high-tension circuit. In connection with this secondary or high-tension circuit is a distributing means by which the current is switched to each of the one, two, three, four, five or six spark plugs in the motor at the required time. The magneto is provided with a timing arrangement whereby the period of spark can be changed so as to advance or retard the spark.

Two illustrations of the Komet show, in a general way, the primary and secondary circuits in this instrument, as well as how the making and breaking in the primary is accomplished and how the secondary is

The Dow Komet Magneto

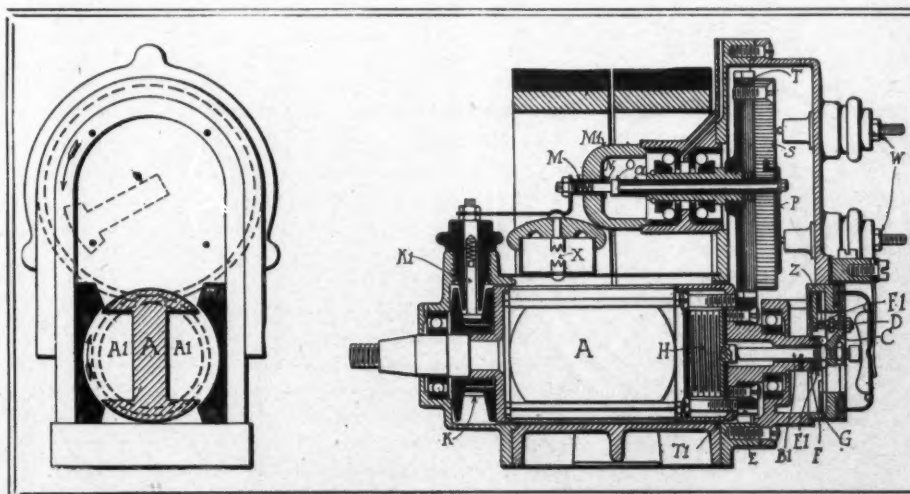


KOMET HIGH-TENSION MAGNETO

distributed, in this case, to the four spark plugs. First, the primary: This winding always is a comparatively few turns of coarse wire around the armature, which is shown at A, in the end view of the magneto, to have hollowed sides A-1 in which this winding rests. One end of this primary winding is connected with this armature core, while the other goes to a brass plate B, which ends in a brass stud B-1. In this way the primary current generated by the revolving of the armature is brought to the contact piece C which holds the platinum screw D. The brass plate B is insulated from the body of the magneto by the hard rubber disk E, shown in black, and also the hard rubber bushing E-1, also shown in black. Against the contact screw D rests the interrupter spring F with its platinum point F-1. This makes and breaks the primary current,

which current is short-circuited from the armature body through the brass plate B, the brass stud B-1, the contact piece C, the platinum points D and F-1 and through the interrupter spring F to the body. In this way the primary winding is short-circuited as long as the armature spring pushes against the contact screw. Again the primary current or circuit is interrupted as soon as points D and F-1 are separated by means of two elevations in the interrupter disk G. A condenser H is connected parallel to this interruption, the current at the time of the interruption entering the condenser, where it is momentarily stored to be given out later. This condenser made in the ordinary way is a most compact one and is of sufficient capacity for the maximum current.

Now for the secondary winding: One end of the wire in this winding is attached or connected with the armature body, while the other end is brought out to the side ring K so the high-tension current is taken off or collected by the carbon brush K-1, which constantly bears on this ring, being held thereon by a spring. From this brush the current is taken to the brass piece M inserted in the hard rubber cup M-1 for insulation. Inserted in the brass piece M is a carbon N, held by a spring against the conductor O of the distributor. This conductor O is insulated from the body by a hard rubber tube O-1 surrounding it, and is connected with a brass piece P inserted in the distributing disk S. This disk is secured by a screw to a gear T driven by another gear T-1 on the armature shaft. By revolving the distributing disk S the segment P is connected rotationally with the four connections W, from which wires connect with the spark plugs. From the spark plugs the high-tension circuit is completed through the car framework back to the magneto. The magneto is fitted with



SECTION SHOWING CONSTRUCTION OF KOMET HIGH-TENSION MAGNETO

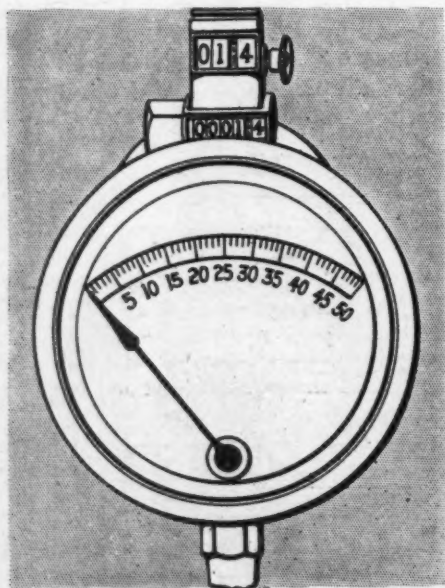
a safety spark gap X; so, should a high-tension wire fall from one of the terminals, the spark jumps over this gap and no part of the magneto is broken down.

This magneto gives two sparks for each revolution of the armature, and when used on a four-cylinder motor must travel at the same speed as the crankshaft; when used on a six it must travel one and a half times as fast as the crankshaft; if used on a three, at three-quarters of the crankshaft speed. The timing of the spark is done by interrupting the primary current earlier or later, and the interrupter disk G is fastened in the timing lever Z, which can be rocked back and forth. In order to start a motor with the greatest ease the spark is advanced as much as possible without danger of a back fire.

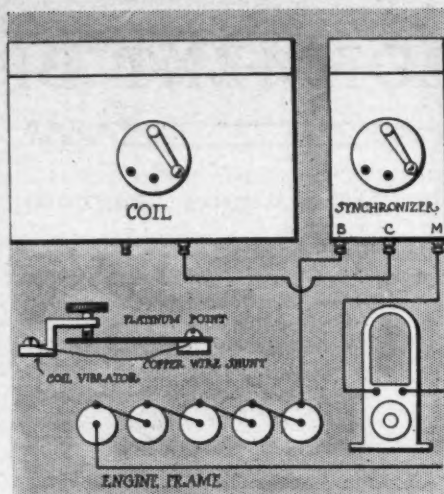
The end section of the illustration of this magneto shows the scheme of fitting it to a motor, which has to be done in such a way that the most advanced spark will occur when the armature is in the position shown. The piston of one cylinder is brought to the point of the earliest firing, the armature of the magneto is brought to the position shown, and the gear or coupling is tightened up on the armature cone so the armature always will take this position when the piston is on the point of earliest firing. By unscrewing the high-tension terminal W it can be found with which cylinder the distributing part P connects. This terminal is next connected with the spark plug of the cylinder which is at the point of earliest firing. The remaining cylinders in the order of firing are then connected with the following terminals in succession.

BULLARD'S SPEEDOMETER

J. H. Bullard, Springfield, Mass., has two speedometer models for the 1908 market, both of which are now ready for delivery. The chief feature in one, the improved model, is that it has but a single hand and by pressing a button not shown in the illustration, this hand will remain sta-



BULLARD'S IMPROVED SPEEDOMETER



WIRING OF K-W SYNCHRONIZER

tionary at the maximum speed of the car and by releasing the button it will instantly return to the speed at which the car is traveling. The claimed advantage of this construction in preference to adding a second or maximum hand is that it does not bring any drag on the hand of the instrument or impair its accuracy to any degree. Using but one hand instead of two gives a simpler instrument and reduces complexity and as there is no second hand to watch there is no possibility of forgetting to release it at the proper moment as a glance is sufficient to show whether it is free or locked. The instrument of this type illustrated is graduated to record up to 50 miles an hour and above the top center of it are season and trip odometers. The other Bullard speedometer for 1908 is of the usual style without the addition of the maximum hand. Both instruments are made with the same care. The shaft turns one and a half times faster than a 30-inch wheel, the instrument having very slowly-moving parts throughout. Because the flexible shaft is attached to a patented universal bracket it can be attached to any car so that all short bends are avoided. The speedometer is designed on the governor weight principle in which a pair of weights attached to a shaft and also to a sleeve are thrown outward by centrifugal force and as they are thrown outward they move the sleeve proportionately. The sleeve connects with the pointer.

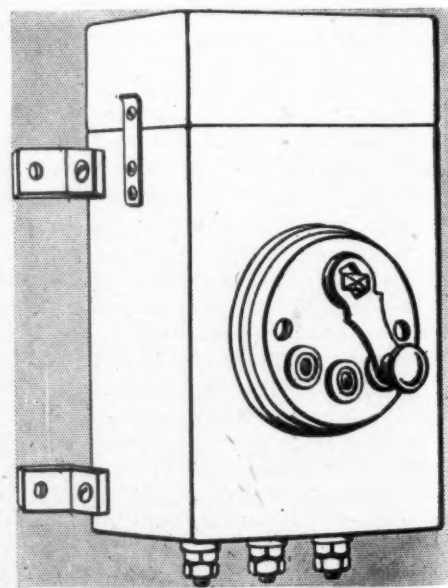
K-W SYNCHRONIZER

The K-W Ignition Co., Cleveland, O., which recently came before the public with its K-W magneto for motor cars, has more recently announced its K-W master vibrator or synchronizer for coils, which comprises a rapid vibrator and a condenser enclosed within a mahogany box equipped with switch for using two sets of batteries alternately or one set of batteries on one side and K-W magneto on the other side. It is intended to be fastened to the dash of the car alongside of the coil and is wired as illustrated in the diagram on this page.

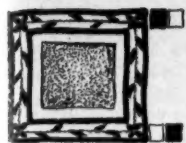
From this diagram it will be noted that

the battery wires are transferred from the coil to the master vibrator or synchronizer, and there is a wire which runs from the center binding post on the synchronizer to one of the battery binding posts on the coil. This places the synchronizer in series with the battery and coil, or with the magneto and coil, so that no matter which unit in the coil the timer closes the circuit on, this master vibrator vibrates for, and shoots or sparks that particular coil. Each vibrator is short-circuited so that the current does not pass through the vibrator on the coil, but passes around them through the copper wire shunt as shown.

This device is intended to eliminate the difference in adjustment and difference in time element of the various vibrators on the spark coil. It is a well-known fact that it is an impossibility to so adjust several vibrators that they will all act in exactly the same interval of time after the timer closes the circuit, and unless they do act in precisely the same interval of time, different cylinders will receive their spark while the pistons are in different positions, or the crankshaft at widely different angles, which would cause a staggering ignition and unequal and irregular firing. Some cylinders would be receiving their sparks too late and some cylinders too early, so that the cylinders instead of acting in complete conjunction would be operating largely against each other. The K-W master vibrator obviates this lack of synchronism by substituting for all the vibrators one single vibrator. It matters not within reasonable limits what the adjustment of this vibrator is, for it vibrates for every cylinder, and no matter what its time lag is, it has to be the same for every cylinder, thus giving synchronism and placing the sparks in every cylinder at the same position of piston and the same angle of crankshaft, just as would a high-tension distributor and a single coil. It does the synchronizing on the low-tension side of the circuit, and does not require any high-tension distributor.

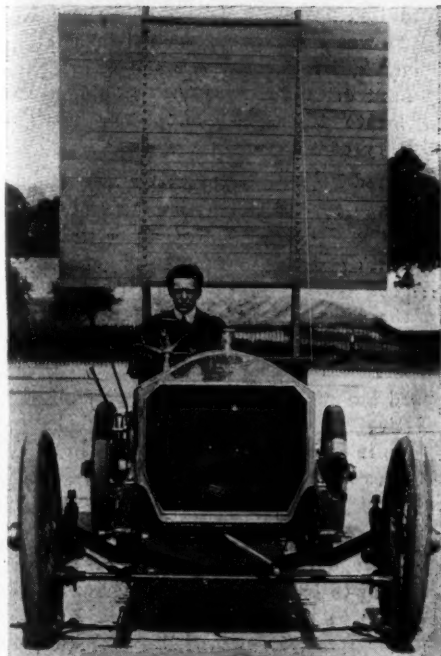
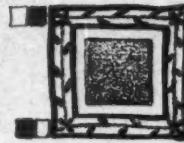


EXTERIOR K-W SYNCHRONIZER



CAR SPEED - WIND = PACE

$$79 \text{ M.P.H.} - 31.15 = 47.85 \text{ M.P.H.}$$



47.85 MILES PER HOUR

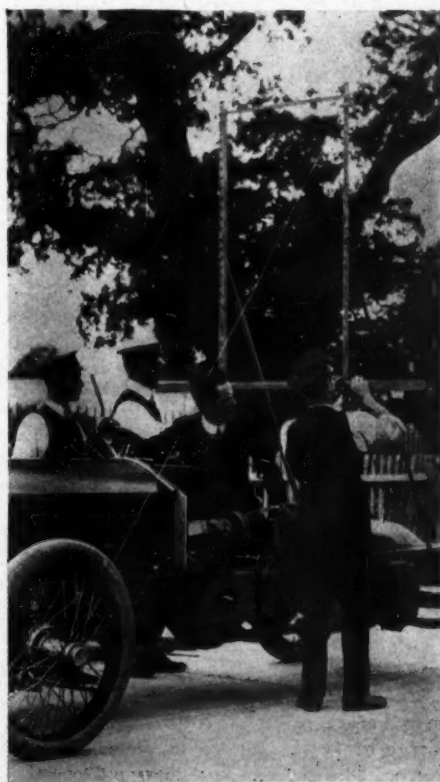
FEW practical attempts made to discover the wind resistance to a fast-running motor car have proved more successful than those conducted 2 weeks ago on Brooklands track, England, by S. F. Edge with his 38.4-horsepower six-cylinder Napier. This car had a wind screen erected on it of 30 square feet, the dimensions being 6 feet wide by 5 feet high, and being built up of laths, each 6 feet long and 2 inches wide, so that each lath represented 1 square foot. Sixteen runs were made, commencing with the total area exposed to the wind and after each run 2 square feet, two laths, were removed and the result came out as follows:

Area of wind resisting screen	Time over flying quarter mile	Speed, miles per hour
1-30 square feet...18	4-5 seconds...47.85	
2-28 square feet...18	seconds...50.0	
3-26 square feet...17	seconds...52.9	
4-24 square feet...16	seconds...56.15	
5-22 square feet...16	3-5 seconds...54.0	
6-20 square feet...16	1-5 seconds...55.5	
7-18 square feet...15	4-5 seconds...57.0	
8-16 square feet...15	3-5 seconds...57.6	
9-14 square feet...15	seconds...60.0	
10-12 square feet...14	2-5 seconds...62.5	
11-10 square feet...14	seconds...64.2	
12-8 square feet...13	3-5 seconds...66.15	
13-6 square feet...12	4-5 seconds...70.25	
14-4 square feet...12	seconds...75.0	
15-2 square feet...12	1-5 seconds...73.8	
16-Normal.....11	2-5 seconds...79.0	
17-15 square feet arranged as gridiron.....15	4-5 seconds...57.0	
18-24 square feet in two blocks with 6 square feet interval between them.....17	3-5 seconds...51.1	

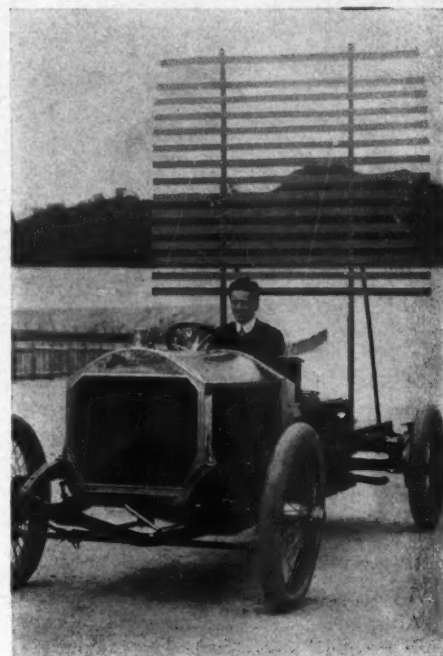
Besides these sixteen runs there were two others, the results of which are very interesting. First was a run with each alternate lath removed, leaving a total wind-resisting area of the screen 15 square feet. The time, however, for this run was 15 1/4 seconds, giving a speed of 57 miles per hour,

showing very clearly that although there was actually only 15 square feet of resistance on the screen, owing to the arrangement and apparent extra skin and corner friction, the resistance was the same as if it had 18 square feet of continuous surface. Motorists should take special note of this, as it is pretty good proof that a large number of small protuberances on a motor car are detrimental to its free running.

The next test was to have a total area exposed of 24 square feet, but arranged in two portions, the top consisting of 13 square feet solid, then a gap of 6 square feet, and then the remaining 11 square feet solid, the total solid area exposed thus being 24 square feet, but the actual effect on the car was as if about 27 square feet were exposed. It will be noted in going through the accompanying table that the slowest speed recorded with maximum wind resistance was 47.85 miles per hour, whereas the highest was 79, a variation of over 31 miles per hour merely by the addition of wind resistance, and practically no additional weight, so all owners of large touring cars with wind shields, limousines, etc., must realize the enormous extra work they are giving their engines to do, and incidentally their driving tires when they travel fast against a strong head wind. This extra work of course is only obtained by the consumption of considerably more gasoline, and so the varying gasoline results that motor car users sometimes get



79 MILES PER HOUR



57 MILES PER HOUR

must be very carefully considered, and the direction of the wind when gasoline consumption tests are being made, in fact the only useful ones are when an "out and home" course is chosen. The front area of the car and driver outside of the wind-shield was 12 square feet.

In 1897 Michelin, the head of the Michelin tire house, conducted experiments on the problem of wind resistances, his trials being over good, hard, dry, dusty macadam roads, with vehicles shod with iron tires. He discovered the co-efficients of traction were .0253 at 7.3 miles per hour the wind blowing with the vehicle and .0272 with the wind against the car. At a speed of 12.24 miles per hour the co-efficients of traction were .0276 and .0344 respectively with the wind first and then against the car. These results showed that the air resistance increases very rapidly as the car speed is increased and that a car traveling at 20 miles per hour has not half the air resistance that a car traveling at 40 miles per hour has, in fact, when you double the speed of a car you more than triple the air and wind resistance. In no sphere in motoring has air resistance come more to the front than in many recent handicapping formulæ that have been adopted for seaside races and hill-climbing events. In such contests the handicapping was first done without taking into consideration the wind resistance of fast machines and at the first the higher-powered vehicles suffered considerably, the formulæ being blamed. With the consideration of wind resistance this trouble was practically eliminated.

From the Four Winds



THOMAS FLYER IN NEW YORK MILITIA ENCAMPMENT

Good Tire Showing—In the Press cup race in France over a distance of 300 miles the winning car went through the race without changing tires, which were Continentals.

Will Oil Roads—County commissioners of Allegheny county, Pennsylvania, are going to oil 12 miles more of road before snow flies. The cost is about \$500 per mile, and when the job is completed three of the most popular motor highways going into Pittsburg will have been made dust proof.

Parade in Buffalo—One of the most important features of the old home week celebration in Buffalo was the illuminated motor car parade conducted under the auspices of the Automobile Club of Buffalo. The parade was led by Seymour P. White, president of the club. The start was made in front of the club rooms, Main and Edward streets, and the motorists proceeded along Buffalo's principal streets.

Used as Reviewing Stand—During the encampment of the New York National Guard Governor Hughes used the Salzman Thomas Flyer, which made the non-motor stop record and also a clean score in the Glidden, for a reviewing stand as well as for a tour of inspection through the camp and the surrounding country. A photograph shows the governor, Brigadier General Pettibone, Adjutant General Henry and Colonel Treadwell in the Thomas saluting the colors of the Seventy-fourth regiment, N. Y. N. G.

Oiling Pittsburg Roads—Oiling roads is becoming quite the thing in Allegheny county and the commissioners are being besieged by motorists and their attorneys to spread the practice. The old Butler pike, the most popular drive out of the city, was treated to a good dose of oil recently and so well were the farmers pleased with the laying of dust that they are after the commissioners of Butler county to extend the treatment. Instead of the oil causing the cars to skid, as was at first feared, it was found that the laying of the

dust makes the machines more reliable. County commissioners say that the oil will save at least 50 per cent in the actual wear of the roads. Sewickley Heights roads are to be treated next.

Glidden's Mileage—Charles J. Glidden, who once more has resumed his globe-girdling, announces that on August 10 he passed the 40,000th mile of his tour in a Napier at Aker's Road, Halifax. He has traveled in thirty-six different countries and has been twice around the world.

New Road Contemplated—State Highway Commissioner Joseph W. Hunter, of Pennsylvania, is ready to advertise for bids for a state road from Irwin to Circleville, Pa., thus affording a new route into Pittsburg and obviating a bad stretch of road on the regular Philadelphia-Pittsburg pike. The road will be connected with the Pittsburg pike near McKeesport, Pa.

After Glass Throwers—A reward of \$25 has been posted by the Automobile Club of Indiana for the arrest and conviction of any person throwing glass on Indianapolis streets or public highways. During the last 3 months there have been many complaints made against glass throwers, especially in rural districts where residents are bitter against motor cars. There have also been innumerable complaints in Indianapolis. There is an ordinance in that city providing heavy penalties for convictions on that offense.

Politician Will Fight—Philadelphia motorists are hoping for an early surcease of the trouble and inconvenience caused them by the overofficial township and borough officials on the route between the Quaker city and Atlantic City. They are banking on State Senator McNichol, the Philadelphia political boss, becoming their Moses. McNichol was held up at Magnolia last Sunday and rather than submit to delay was compelled to pay \$13.50 to the magistrate before whom he was haled on the charge of fracturing the local speed ordinance. The senator is a fighter from the drop of the hat and declares he's going

to contest the case for principle's sake. He says his car was doing about 15 miles an hour when flagged, but he had to pay just the same. He has ordered his attorney to prepare an appeal.

Stray Car Found—A large Pope-Hartford touring car bearing the license No. 29425 was recently abandoned in a lot in Dunkirk, N. Y. The car shows evidence of hard driving. An effort is being made to locate its owner and clear up the mystery of the motor car.

Barred From Park After 9 P. M.—Some time ago the park commissioners of Hartford, Conn., barred all motor vehicles from Goodwin park after 9 p. m. in the interest of good morals, much to the discomfort of the law-abiding sort. Manufacturers have made use of the roads through the park for testing purposes and now the board has ordered a discontinuance of the practice inasmuch as the roads are badly cut up in consequence. The park is one of the most picturesque to be found in the entire city system.

Wants Convict Labor—John L. Davis, of the Chicago and Eastern Illinois railroad, is trying to interest the Indiana bureau of charities in a project for employing convict labor on Indiana public highways. Davis believes if Indiana highways were more perfect that farmers would haul more grain and fruit until late in the fall and winter. It is known that Amos Butler, secretary of the bureau, is opposed to convict labor because the state's penal institutions are located at extreme ends of the state, but he is said to favor using inmates of workhouses and county jails on the improvement of the roads.

Would Tax Motor Bus—An ordinance, which will be submitted to the common council of Buffalo and which has for its purpose the taxing of all motor vehicles used for conveying passengers at a given charge, \$100 per year, is being drawn by City Attorney Ryan. He says that such machines should be taxed the same as hacks. The Buffalo police are trying to rid Shelton square of all motor vehicles that seek to make a sort of hack stand of the place. In the municipal court recently a jury acquitted Charles Fitzgerald, a chauffeur, who was charged with refusing to obey the commands of a policeman, who ordered him off the square.

St. Louis to Have Tour—The Automobile Club of St. Louis' first annual owners' reliability tour will be run on Saturday, September 21. The start will be made at 10 a. m. on Lindell boulevard in front of the St. Louis club, and the test will be over 86 miles of good roads and through the most picturesque portion of St. Louis county. It is the purpose of the committee to make the tour a pleasure run so that contestants may be accompanied by members of their families. Professionalism will be eliminated and a commercial contest will be avoided. Entrants will be furnished with a map of the route and a

card giving detailed information thereof, location of controls, etc. Entries will close September 4. James Hagerman, Jr., is chairman of the committee and is counting on a big field.

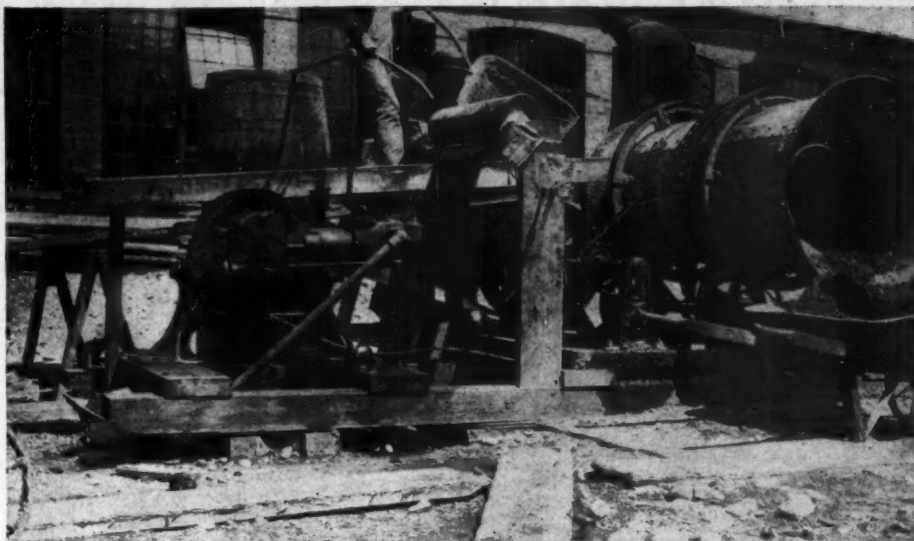
Fair Offers Big Prizes—The Missouri state fair has hung up a \$1,000 purse for a free-for-all 10-mile motor car race which will be run at Sedalia October 8. Dr. A. H. Heaton, president of the Sedalia Automobile Club, will answer inquiries regarding the race.

Babcock in Mileage Test—In order to demonstrate to F. D. Leathers, who has the St. Louis agency for the Babcock, that the electric is capable of traveling a distance on one charge, officials of the Babcock company took him out for a trip which lasted 106.1 miles over all kinds of roads. The test was made on the spur of the moment and after the battery had been fully charged. Niagara Falls, Tonawanda, Beach Ridge, Bowmansville and Eggertsville were included in the trip.

On Long Tour—The St. John, N. B., Automobile Association started last Saturday on a run that will comprise more than 1,000 miles before the members reach home again. The returning point will be Boston. The first stop was St. Stephen. Sunday they reached Bangor. Monday found them in Rockland. The day following they went to Brunswick and the next day got to Portsmouth. Boston was reached Wednesday. That made a total of 501 miles. They plan to spend several days in the Hub and will return on the steamer next week.

Protecting the Horse—Because of the number of accidents reported recently in and about Boston, where motor cars have run into carriages, injuring people and horses, and made off without stopping to inquire the results. President George T. Angell, of the Massachusetts Society for Prevention of Cruelty to Animals, has sent out the following notice: "In behalf of the Massachusetts Society for the Prevention of Cruelty to Animals, I hereby offer a reward of \$10 for evidence that will convict any driver or owner of a motor car who shall in violation of law cause the death or serious injury of a horse."

Demand for Second-Hands—Prospects for a lively fall trade in second-hand cars were never half so good in Pittsburg. Every concern in the city that makes any specialty of this line of trade is reported to be having more calls than it can attend to. Motoring has taken hold of the suburbanites this year as never before and hundreds of clerks and small business men who have never afforded a machine before are now to be seen in small cars going to and from their work instead of being packed in musty street cars or walking a mile to and from the railroad station. It is this class of buyers who are particularly anxious to get cars now at reasonable rates and bargain sales are well patronized. The demand for cars from residents of the big



OLD RAMBLER MOTOR AS STATIONARY ENGINE

manufacturing towns around Pittsburg is also increasing rapidly and machines costing \$2,000 or less are in splendid demand. Good second-hand cars are going to these customers by the dozen.

Postpones Hill-Climb—The Automobile Club of Bridgeport postponed the proposed hill-climb at Sport Hill, Easton, Labor day, to May 30, 1908. The reason for doing this is that many of the club members are out of town on their vacations and it would be impossible to handle the matter as satisfactorily as at the beginning of the season.

Truck for Garden Truck—The usual methods of sending garden truck to the markets are proving too slow and antiquated for the owners of the accommodation stock farm, located between Burlington and Mount Holly, Pa. During the past fortnight there has been such a demand for potatoes that the usual means of conveyance proved entirely inadequate and the accommodation opened the eyes of Mount Hollyites by securing a motor truck which carries such huge loads of the tubers and other vegetables that none of the wagon scales in town could record the weight of the shipment, and the weighing had to be done in sections.

In Constant Service—The accompanying illustration shows one of the first of the single-cylinder Rambler motors used as a power unit for a concrete mixing machine. It is fitted with the regular equipment standard at the time of its construction 5 years ago, both as to carburetor, lubricating and igniting systems. Like all Rambler motors previous to 1906, it is provided with an automatic spark controller and with the throttle locked in position runs for hours under the varying loads to which it is subjected without appreciable change of speed and probably gets less attention in a week of steady running than will be given to the average motor car engine in a trip of a few miles. While the power demanded is not excessive, when it is considered that the engine is exposed

to all kinds of weather and is generally half covered with sand, mud and oil, it is claimed that the service is about the most strenuous to which an engine of this character could be submitted.

Meet for Harrisburg—The energetic Motor Club of Harrisburg is preparing for its first track meet, which will be held on the fair association track at Middleton, Pa., on Saturday, September 21. There will be nine races.

Mile in 52 Seconds—Walter Christie broke the world's record for a mile track at Boston Saturday, when he made the circle of the Readville track in 52 seconds. Christie was simply practicing. In his first trial he made 53½ seconds and on the second time around he made 52 flat, which was just a second under the record of 53. Christie's mile is not official because it was made in private. The Readville Labor day meet was postponed because of rain.

Insist on City Tags—City Controller Breunig of Indianapolis is preparing to wage law against car owners who have not paid the 1907 \$3 license fee of the city. Owners believe that the recently enacted state law exempts them from paying a city license. It is contended by the city authorities that as the city license is for revenue only; that it is legal. Notices are being prepared for delinquents. These notices are to be followed by warrants.

Will Tar the Roads—The municipal authorities of Washington, D. C., intend to overcome the mud and dust nuisance by coating all the macadam and dirt roads in and adjacent to the city with a tar preparation. The engineer commissioner has just returned from a visit to Montclair, N. J., where the roads have been treated with tar. He is convinced that this preparation could be used to excellent advantage on the roads in the vicinity of Washington. The work will be commenced at once and will be continued until all the roads have been treated. It is estimated that the cost of treating the roads with tar will be about 12 cents per square yard.

OPERATING MOTOR CARS ECONOMICALLY

IN THIS enlightened day, when modern and labor-saving apparatus and contrivances are sought by everyone, the progressive physician is either the owner of a motor car or realizes its importance in his practice and looks forward to the day when he can afford to gratify his desire, and not only realize greater comfort but find it possible to increase his income and handle a larger practice on account of the saving in time. The manufacturers of motor cars appear to be fully alive to the fertile field represented by the doctors, but the majority of them are turning their eyes more in the direction of the city physician and the specialist who can afford to gratify their dignity by purchasing a high-priced, high-powered and luxuriously appointed car. The country physician has nothing in common with cars of that type, and his wants are generally overlooked and his requirement for a cheaper car is neglected. There are two or three manufacturers, however, who appreciate the fact that there are twenty-five country doctors where there is one city doctor, representing a prospective purchaser. I have been fortunate in finding a car which seems to be admirably suited to my own purposes, and I am glad to tell my brother practitioners of my experience. I was a close observer of motor cars long before I became an owner. I talked with physicians owning cars and for the past 2 years have been driving a car of my own. Therefore, I feel that I have sufficient experience and data at command to offer an unbiased opinion to other physicians.

Based upon this personal experience, I am a strong advocate of the type of car representing a low cost, combined with great durability, one representing economy in operation and up-keep. There are many physicians and specialists whose incomes make it unnecessary for them to consider these details, and many others have outside sources of income beyond that derived from their practice, but I have yet to meet a doctor who can successfully argue with me that it is good judgment to make calls for \$1.50 and \$2 in a conveyance that will cost all the way from \$1,000 to \$4,000, particularly when it is taken into consideration that a lot of money is involved in tire renewals, repairs, and general up-keep, in addition to which the cost of gasoline and oil is an important factor. It is really the case that a car costing \$2000 or more embodies many complications and requires the employment of an expert to drive it and keep it in repair. What the country doctor needs is a car that is free from complications and can be kept in general good order and efficiency by him during his few moments of leisure.

If it is true, as claimed, that a motor car depreciates 40 per cent in value the

What Users Have Found in the Matter of Expense on Road

first year and 20 per cent each additional year thereafter, the doctor who practices medicine for a living will be decidedly out of pocket after a season or two with an expensive car and will be glad to reconsider his judgment and give more attention to economy.

Aside from a motor car, the most successful riding conveyance I have ever owned consisted of a hardy pair of western horses and a buckboard. I covered more miles with more comfort and less expense than would be possible for a doctor who keeps an expensive pair of thoroughbreds and a proportionately expensive equipment, who incidentally hires a good tough livery team to save his horses and the varnish on his outfit when he has actual rough road work to do.

I recognized at once that the car has not yet been built that will successfully negotiate black mud and deep snow. Therefore, I decided I wanted a car for rough and ready service at a minimum expense, and I invested in an "Orient runabout of the type familiarly known as a buckboard. I made this purchase 2 years ago and my subsequent experience has justified my choice. The expense of up-keep and repairs has been very small indeed, and has been represented by the purchase of two tires, a change of bearings, and some minor details, chiefly the result of my inexperience and tinkering with construction of which I knew nothing. The cost of these parts has been very small compared with similar parts of heavier cars.

I have operated my car night and day, summer and winter, and in all kinds of weather. I run it wide open and with a disregard to the character of the streets and roads that would ruin a more expensive car in short order. I have never been towed but once and that was when I was mired in the worst kind of mud in a place I never should have attempted. My car weighs less than 700 pounds and is almost as easy to handle as a light buggy. The distance one of these light-weight cars will run on a gallon of gasoline is simply remarkable. I do not know how much my gasoline bill has amounted to, but estimate that under ordinary road conditions I run from 15 to 25 miles to the gallon, and inclusive of stops for teams, mud holes and other setbacks encountered on the road, I easily average 15 to 18 miles an hour in speed. On my short trips of 10 miles or less, I can pay all of my professional visits in less than half the time that I could do it with a horse and buggy.

My car originally was the single-cylinder type, but recently I have equipped a double-cylinder motor of twice the horsepower and now can go over the ground

much more rapidly than heretofore, and can attend to my practice in about the same length of time that would be required by one of the high-priced, high-powered cars.

My car has a narrow tread, 42 inches, and this has been the subject of some discussion with my friends. I have reached the conclusion that no special tread is suitable for all roads. Within a mile, I have realized the wide tread would be beneficial and then met conditions that made me glad I had the narrow tread. I have negotiated every hill in my section and have traveled over all roads comfortably. Some of the roads I travel are very sandy but they do not stop me. I attribute this to the friction transmission employed in my car, which permits of five speeds forward and two reverses. By means of this transmission, I derive nearly double driving power on the lowest speed that would be possible to attain with a gear construction. It has another advantage, for there is no possibility of stripping gears through careless handling or unusual strains, for even at the worst the motor would be stalled and no damage result. My car, although a lightweight is not at all noisy and is quite free from all kinds of vibration.

I had one experience worthy of mention. While going at full speed, I accidentally struck a large bridge timber that would have smashed a larger and heavier car. The only damage resulting from it was the breaking of front springs, which were replaced at a cost of \$4. The lightweight cars represent a saving on tires in general wear and tear that must not be ignored by the users of them.

So far my car has not been laid up during hot or cold weather, except for very deep mud or snow. Once a week I pay a boy a quarter to clean up the brass and turn the hose on the car and this seems to be sufficient to keep it in a very presentable appearance. For trips encountering extraordinary conditions, I hire a livery team and find it very economical. I doubt if I shall ever again own a horse. It is my experience they are not only slower and more nerve-racking, but much more expensive to keep. The saving of time and expense is of course a real economy, but the greatest saving is in one's own flesh and health. The use of a motor car permits the doctor to get more sleep, to indulge in regular meals and hours, to handle a larger practice in less time, and with less to worry and detain him while on the road.

As a side light of the motor car question, I would mention that I owe many good fees to the reputation I have for arriving quickly in response to calls. Country practice is becoming every year more and more an ambulance proposition. With the telephone in every house, the patient

will not wait for his regular doctor if he is slow in responding, for it is too easy to call up another doctor who will arrive on the scene in a hurry.

In further support of my argument for the low-priced car, I would strongly urge any country doctor who intends to purchase a motor car to first take into a quiet corner some intimate friend of his who owns a high-priced car and insist upon knowing the amount represented by his monthly expense. Few men will divulge the facts but if they can be obtained, they will prove surprising. I do not know my own exact figures of expense, but I will gladly assist with any information at my command and with my experience any brother practitioner who applies to me for further details. Quite naturally, I favor the car I use myself, for it was selected after careful investigation and has proved to answer my requirements faithfully and economically, but I am not prejudiced in this respect, and my sole argument is for the moderate-priced motor car for the country physician.—H. M. Ferguson, M. D., Morris, Ill.

Cadillac Has Good Record

One of the most important questions that arises in the mind of an owner of a motor car, is the cost of maintenance of his car. It is very difficult for one who does not look personally to the upkeep of his car to determine the four points which enter into its maintenance. How long will a car last? What does it cost to operate it? How many miles will it run on a gallon of gasoline? How long will the tires wear? These are probably the four most important factors in the life of a motor car. In some cases in the hands of a competent driver a car will give a great deal more satisfaction at a minimum cost as compared with the same car in the hands of a less experienced man. To determine the average cost of maintaining and operating a motor car, a manufacturer has just compiled statistics showing that with judicious handling and the ordinary care that should be accorded a motor car, the amount to support a machine is not nearly as great as most people believe. The Cadillac company determined recently to discover the cost. It sent invitations through the newspapers throughout the country and to owners of single-cylinder Cadillacs, asking them for sworn statements as to the total expense incurred in the maintenance of their car. Of those who responded, hundreds were willing to make statements of the approximate cost of running their cars, yet none of these was used. Only the actual cost sworn before a notary public and witnesses were accepted. One hundred and sixty-four statements were received, coming from thirty different states, which show records of cars that have been used on all kinds of roads under all sorts of conditions. From the data received the following statistics were compiled: The

mileage gotten out of the cars varied considerably, ranging from 850 to 32,000. Many of the affidavits showed a mileage of over 20,000 and nearly 50 per cent had gotten over 10,000 miles out of their car. The total combined made over 1,500,000 miles, or to be exact, 1,555,427; the average of this was 9,661 miles per car. The gasoline consumption afforded great interest, one car running as low as 9 2-3 miles per gallon, while another ran as high as 32 miles per gallon. Forty per cent of the number has claimed to get over 20 miles per gallon, while the average of all is a trifle over 18 1/2 miles per gallon.

Figuring on the cost of repair, this amount ranges from practically nothing in some cases to several hundred dollars in others. The total amount of repairs, not including tires, for the 161 cars, was \$6,881.29, or an average for each car of \$42.74. For the average length of time the cars have been used 1 year, 7 months, 20 days, it means an average of \$2.17 per month, or less than 51 cents per week. Another way to compute the cost would be to total the distance traveled, taking 161 cars totalling 1,555,427 miles and with the total cost for repairs \$6,881.29, it means that the cost of the upkeep averages

.004939 per mile, or in other words only 44 1/4 cents per hundred miles that is traveled. That certainly is cheaper than walking. In considering these points do not overlook the number of passengers carried. Some were runabouts carrying one or two, and sometimes three passengers, while others were four-passenger cars carrying five or six passengers. The average as shown by affidavits was nearly 3 1/2 persons, so it would make this expense less than 13 cents per 100 miles for each passenger carried.

The next item of expense is that of gasoline. The sworn statements show that the miles obtained per gallon run from 9 2-3 up, several going 23 or more, and one as high as 32 miles per gallon. The average of the lot shows 18.34 or a trifle over 18 1-3 miles per gallon. The cost of gasoline varies in different parts of the country, but may probably be averaged at 18 cents a gallon; it would then make the average 1 cent per mile per car for fuel, or less than 1-3 cent per mile per passenger for transportation.

To obtain the amount of expenditure for tires, which in some cases had been included in the repair expenses because many owners do not keep separate expense accounts, 200 dealers throughout the country were asked the following questions: What is the longest time you have known a set of tires to wear? What is the greatest number of miles you have known a set of tires to run? If a customer were to ask you as to about how long or how many miles a set of tires could be expected to last, with proper care, what would you tell him? The answers to the first question were in about 2 years, in some cases less, and in several cases 3 years, and one answer was 4 years. To the second question the answers were all the way from 4,000 to 15,000 miles, but the majority run along from 6,000 to 9,000 miles. Regarding the third question there was a wide difference of opinion, but they averaged up between 1 and 2 years and from 5,000 to 10,000 miles, many replies being qualified by the statement that it would all depend upon the carefulness of the operator and the roads he would have to travel.

Showing by a Peerless

Evidence is not wanting that some of the high-priced, high-powered cars do not demand excessive expenditures for upkeep. Leonard D. Keefer, of New Orleans, was of the class which believed that all big cars were expensive luxuries. However, in the early part of 1906 he was induced to purchase a Peerless car, and as he thought to prove his contention that it was very expensive to own a car of this kind he kept a very careful record of maintenance expenses. At the close of the year he discovered that the actual total cost for the year was \$519.51. This gives the cost per month as \$43.30, and as he traveled 6,644 miles it makes the actual cost per mile but 8/10-cent.

BUS SERVICE IN EUROPE

Washington, D. C., Sept. 2.—The federal government has received some interesting facts and figures regarding municipal transportation in various European cities. In Milan, Italy, there are about twenty-five motor cabs in operation. They are run by a private company and each is equipped with a taximeter. The charge is 14 cents for the first 1/4 mile and 2 cents for each following 1/8 mile for a fare of not more than four persons. The company has in service two types of cars, driven by benzine and by electricity. They have both the fixed and "cape cart" tops. The gas cars cost about \$2,500 each and the electrics \$2,000. The gas cars carry a supply of about 50 quarts of benzine and consume about 1 2-3 quarts per mile, giving the car a radius of 30 miles without refilling tanks. Benzine in Italy costs 14 cents a quart. The electrics are equipped with accumulators of German make and they run the car for 30 or 40 miles without recharging. All cabs in Milan are under municipal control and there are heavy penalties for overcharging or refusing fares. The taximeter system is about to be adopted generally in London for vehicles on hire in the streets. Great success has followed the introduction of the continental taximeter motor cabs in London at low rates of fare and with chauffeurs in smart liveries. To meet this competition the horse cabs and hackney proprietors have been compelled to ask permission of the authorities to use the long objected to taximeters. The new motor cabs charge but 16 cents a mile for one or two passengers, as against 20 cents by hansoms.



AMONG THE MAKERS AND DEALERS

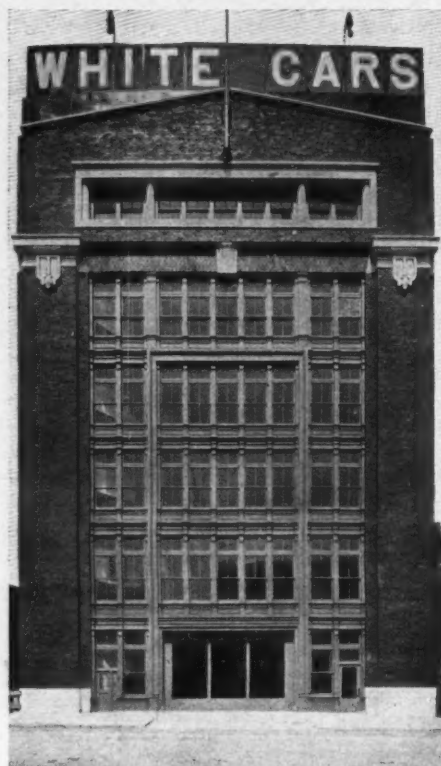


Page Out, Bennett In—Carl H. Page has resigned as manager of the New York branch of the White company, to take effect October 1. George W. Bennett has been appointed as his successor.

Makes a Change—G. G. Bowersox, formerly designer and superintendent of the Springfield car manufactured by the Med-Bow Auto Co., announces that he has accepted a position with the Pennsylvania Auto Motor Co.

New Hartford Garage—R. D. and C. O. Britton, Hartford agents for the Maxwell, have rented the building at 47-57 Allyn street, which they have remodeled for a garage. Maxwell cars will be handled exclusively and a few will be carried for rent. There is a well-equipped machine shop, repair department, storage and the like, in fact everything has been done which converts the building into an up-to-date garage. The Britton brothers have the largest horse goods establishment in the city and entered the motor field as a side business. The location of the new garage is central and adjacent to the best hotels which cater to motorists.

White's Boston Garage Opened—The \$150,000 six-story fireproof garage at 341-343 Newbury street, Boston, that has recently been erected by the White company, of Cleveland, O., was opened to the public Tuesday, September 3. New England Manager J. S. Hathaway announces that the garage accommodates 200 White cars. This new public garage is 100 feet in height with a 62-foot frontage. The structure is what is termed first-class construction, having a frame of steel and brick, and being absolutely fireproof. The floors are all steel and concrete. Each and every floor is virtually without a post. With the exception of the third, all the floors are to be given over to storage. The third floor has been leased to the Boston Y. M. C. A. to be used for its motor car and electrical school. The appointments of the chauffeurs' room on the second floor have not been overlooked. Individual steel lockers have been provided, a pool table installed and barber service and shower baths will be inaugurated. Two fast electrically-operated elevators, running from basement to the top floor at the rate of 60 feet per minute, have been installed. The one in the rear will carry all cars ascending, the other in the front will carry all cars descending. The wash-stands are capable of handling three cars at one time, and are situated in the rear of the first floor. The White company wishes to correct false rumors and impressions that have become somewhat prevalent that it is going to vacate the building at 320 Newbury street, which it also owns, and remove its stock, repair,



NEW BOSTON WHITE GARAGE

office and selling departments to the new building. This is not so. The old building will remain absolutely as it is now, while the new building will be used for garage purposes only.

Spreads Out—The east end branch of the Goodyear Tire and Rubber Co. at 5988 Center avenue, Pittsburg, has been enlarged by the addition of a modern tire repair department. A large building has been provided for the department.

Buys Angier's Interest—H. M. Butler, president of the Angier Auto Supply Co., of Boston, is now the sole owner of that concern. Last week he purchased the interest of O. M. Angier, who was treasurer of the corporation. The name of the company hereafter will be the Butler Auto Supply Co.

Dragon Reorganization—A recent reorganization of the Dragon Automobile Co. at Philadelphia is reported, one of the details of which is the return of John Kane Mills to the active work of the presidency, from which he retired last spring on account of ill health. While there has been no radical change in the interests involved in the company's work, there has been a readjustment which will insure increased activity from this time forward in the building and marketing of the Dragon car. The list of officers is as follows: President, John Kane Mills; vice president and treasurer, Henry Rawle; second vice president and sales manager, A. L. Kull; gen-

eral manager, J. H. O'Brien; directors, J. F. Grimes, Pittsburg; Francis Rawle, Philadelphia; John Kane Mills, New York; Henry Rawle, Philadelphia; A. L. Kull, New York.

Outing for Employees—The Timken Roller Bearing Axle Co. employees had an anti-friction outing at Cedar Point, O., last Saturday, going there by steamer and spending 6 hours in the picnic grounds at that point.

Open Philadelphia Branch—The demand for Stevens-Duryea cars in the Philadelphia territory has been so good that it has been found necessary to open a branch there. F. Windsor Eveland, son of the manager of A. G. Spalding & Brothers, New York agents for the Stevens-Duryea, has been placed in charge.

Another White Branch—The White company will establish a branch agency in Providence, R. I., in a short time. At present all the business of the New England states is conducted practically through the Boston house by J. S. Hathaway, the New England manager. Watson Coleman is to be placed in charge of it. At present Mr. Coleman is conducting the Lynn headquarters of the White.

More A. M. C. M. A. Recruits—Three more concerns have been admitted to membership in the American Motor Car Manufacturers' Association as a result of a vote taken by the members, making a total of forty-nine manufacturing concerns. The latest concerns admitted include the Reliance Motor Truck Co., Detroit; Gaeth Automobile Works, of Cleveland, and the Imperial Motor Car Co., of Williamsport, Pa., which is Senator Cochran's concern that is being managed by Fred P. Brand, formerly of the Autocar company.

Stoddard-Dayton Agents Meet—The Dayton Motor Car Co. recently held a convention of its agents. The program of this convention, which was arranged with an idea of mixing business with pleasure, was started Thursday morning by inspecting the factory from 10 to 12 a. m. Luncheon was served at the Dayton Club. The afternoon was spent in inspecting the 1908 models. At 5 o'clock the visitors were given a motor ride, which ended at Wise's camp, where a chicken dinner was served. Friday was given over to a general business meeting, at which a number of valuable suggestions was received. The entire body of sales agents, together with the heads of the different departments of the Dayton Motor Car Co., took dinner at the Algonquin hotel; and were afterwards entertained at a smoker at the Dayton Club. Saturday was given over to personal interviews and further inspection of the new models of cars. Ed. Leinbach, of Baltimore, who so successfully drove the model K roadster in the Hower trophy con-

test, was a guest of the company, and while at dinner at Wise's camp on Thursday evening was presented with a loving cup by the agents of the Dayton Motor Car Co. for his good work.

Colt Officials Named—The Colt Runabout Co. has appointed a sales manager and purchasing agent. The man selected for the former position is Harold J. Elsworth, previously connected with the sales department of the Maxwell-Briscoe company, and for the latter C. B. Craske.

Steam Man Now—George Brooks, recently head of the sales department of the Philadelphia Autocar branch house, has joined Frank W. Stockbridge as a steam exponent and will hereafter represent the White car and act as assistant manager, vice E. C. Johnson, who recently joined the Packard forces in the Quaker City.

G. K. Wheeler Dead—The sudden death of George K. Wheeler, sales manager of the Columbus Buggy Co., of Columbus, O., is announced. Mr. Wheeler left the office of the company at noon on August 24, apparently in the best of health, but died suddenly from heart failure at 2 o'clock that afternoon. Mrs. Wheeler accompanied the remains to Boston, where they were interred.

Testing the Acme Six—The first 1908 Acme six-cylinder car is now being tested on the roads near Reading, Pa. This six-cylinder car will develop between 50 and 60 horsepower, it is said. It has a somewhat longer wheelbase than the 1907 four-cylinder model and is hung much lower. The clearance of the car is about the same as the old model. One feature of this car is the new Acme carburetor.

Berliet Out of Shows—The American Locomotive Automobile Co. will not be in either show this year. This company maintains a neutral attitude and is not a member of either of the manufacturers' associations. For this reason it could not obtain preferred space and therefore it decided last week not to be a part of any show but to hold a 2 weeks' show of Berliet cars independently in the reception room of the Waldorf-Astoria near the Thirty-third street entrance from October 24 to November 9.

Additions to Rambler Factory—About this time each year a corps of men may be found at the Rambler factory in Kenosha busily engaged on new structures, both in the way of extensions on old buildings and in the construction of new ones. These buildings are all of concrete, both floors and walls, with saw-tooth roofs of steel and glass, thus assuring both light, sanitary conditions and protection against fire. Another recent addition to the factory facilities is an artesian well approximately 1,500 feet in depth. The lighting and heating plants being, of course, a part of the factory equipment, the establishment of this water supply now renders the entire Rambler factory independent of all

outside service. The building extensions now in course of construction aggregate 50,000 feet of floor space, which brings the total floor space of the Rambler plant to approximately 16 acres.

Company Reorganizes—In the reorganization of the Girard Motor Co., 236 North Broad street, Philadelphia, local Cleveland agent G. S. Ruhland has been named as president, Harry Schimpf secretary and W. T. Graham treasurer.

Ask for Charters—The Greensburg Automobile Co., of Greensburg, Pa., has applied for a Pennsylvania charter. The members are W. W. Jamison, H. D. Jamison and Henry W. Coulter. A garage will be built in Greensburg at once. The Central Automobile Co., of Pittsburg, also has applied for a Pennsylvania charter. Its promoters are E. L. Seeley, J. L. Gilmore and F. P. Patterson, all well-known dealers of greater Pittsburg.

Makes His Own Changes—Chester H. Porter, of Lynn, Mass., has changed a 1905 12-horsepower Franklin from a sprocket system to a direct shaft drive. The old style car with the motor crosswise was changed to an up-to-date model with the engine lengthwise. Another alteration was to connect the low and reverse speeds with pedals permitting the use of the gears quickly and easily and leaving only the high speed lever to be operated.

New Fender Out—Pittsburgers are much interested in the new fender device just patented by Dante J. Welton, of Cleveland. Over 200 Pittsburg cars will be equipped with the device within the next 2 months, according to one of the best-posted dealers in this city. Mr. Welton's invention not only serves to knock the person struck out of harm's way, but also serves to protect the car's front and its lights. It consists of an arc-shaped casing of rubber extending in front of the car from one side to the other. It is about 6 inches thick in the center and is hinged so it may be thrown up against the side of the car and out of the way

when it is necessary to crank the motor. A determined effort is being made to have the device manufactured in Pittsburg and abundant capital is offered for this purpose.

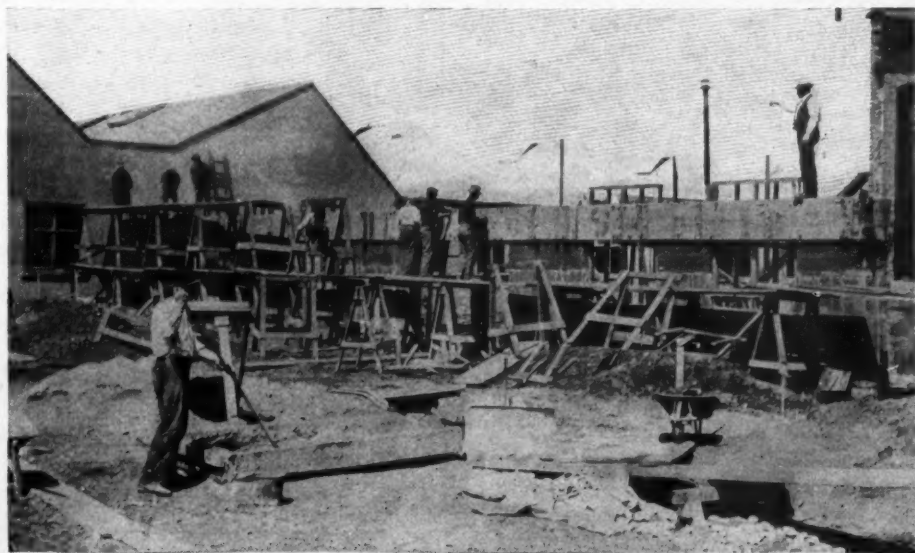
Dealers Incorporate—The Automobile Dealers Association of Pittsburg has been chartered with a capital of \$5,000. Its officers are: Treasurer, W. N. Murray; directors, W. N. Murray, A. L. Banker and W. H. LaFontaine, of Pittsburg.

Will Rebuild—President McLaughlin, of the East Liberty Automobile Co., of Pittsburg, which was burned out recently, has started architects to work on a new garage that will be practically fireproof. He wants no more frame buildings. At present the company is quartered in an old building next to its former home.

Apperson Six Announced—The Apperson Brothers Automobile Co., of Kokomo, Ind., has decided to put out a six-cylinder model for 1908, a 55-horsepower touring car, which rounds out its line, which now consists of a 50-55-horsepower touring car, a 30-35-horsepower four-passenger runabout, the Apperson Jackrabbit and the six.

Pittsburg Show Date—The second show conducted by the Automobile Club of Pittsburg will be held the first week in April, 1908. Thomas Cochrane will be manager of the event. The show will be at Duquesne garden at Fifth avenue and Craig street, where the first one was held, and space will be rented for a 10 days' exhibit.

Logan Changes—B. W. Twyman, who has been connected with the Logan company, of Chillicothe, O., as sales manager and buyer, has severed his connection with that concern, although he still maintains an interest in it. He has been succeeded as buyer by B. A. Gramm, the company's general manager, and as sales manager by B. E. Stevenson. F. C. Lindorfer has accepted a position as assistant sales manager. The publicity and advertising end of the business will also be looked after by Mr. Stevenson.



WORKING ON ADDITIONS TO THE RAMBLER FACTORY



BRIEF BUSINESS ANNOUNCEMENTS



Cleveland, O.—The United Motor Car Co. has taken the local agency for the Gearless car.

Bay City, Mich.—The Creeley Air Motor Co. has been incorporated with a capital stock of \$25,000.

Tacoma, Wash.—A. G. Foster is to build a one-story garage at North Sixth street and Tacoma avenue.

Houston, Tex.—The Mosehart and Kellar Automobile Co. has been incorporated with a capital stock of \$15,000.

Pontiac, Mich.—Harry Hamilton has been appointed general manager of the Rapid Motor Vehicle Co.

Detroit, Mich.—Application has been made for a receiver for the Huber Automobile Co. by Edmund Spring, the president of the concern.

Pittsburg, Pa.—F. R. Budd, who is the president of the Highland Automobile Co. of this city, died from cancer after an illness of several months.

New York.—Lafayette Markle, who was formerly connected with the local branch of the Corbin company, has joined the forces of the Oldsmobile Co.

Owosso, Mich.—Endeavors are being made to secure a large motor car manufacturing concern for this city. The name of the company has not yet been announced.

Olympia, Wash.—The Walla Walla Motor Car Co. has been incorporated with a capital stock of \$10,000. The incorporators are W. J. Corkrum, A. L. Lutz and R. W. Riggs.

Canton, O.—The Hedgeland Mfg. Co. has been organized with a capital stock of \$60,000 and will engage in the manufacture of a new anti-skidding device. The company will be located in the old Aultman engine building.

Richmond, Va.—A new company has been formed under the name of the Bowman Transfer and Storage Warehouse Co. It will do a general transfer and storage business, and will use electric trucks, as well as electric buses, carriages and cabs.

Greenport, L. I.—A new concern, to be known as the Greenport Motor Co., has entered the field. The company will manufacture gasoline engines, etc. W. Desilets, formerly of the Greenport Basin and Construction Co., is the prime mover in the company.

Washington, D. C.—The concern formerly known as Reed Brothers has been incorporated under the name of the Washington Garage Co. with a capital stock of \$150,000. The new company will remodel the halls of the Ancient building, where it is now located, into a modern garage. G. E. Reed is the president of the com-

pany; W. E. Reed, vice-president; M. W. Hill, treasurer, and R. G. Donaldson is the secretary.

Pittsburg, Pa.—The branch of the Good-year Tire Co. has been greatly enlarged and improved.

Hartford, Conn.—The Hartford Automobile Parts Co. has increased its capital stock to \$35,000.

Columbus, O.—Contracts have been granted for the erection of a new garage on East Gay street.

New York.—The Pioneer Auto Repair Co. has been incorporated with a capital stock of \$2,000, and will manufacture motors, engines, etc.

Trenton, N. J.—The Young's New Pier Automobile Co., of Atlantic City, has been incorporated with a capital stock of \$100,000, and will do a general motor car business.

St. Paul, Minn.—The Nelson Mfg. Co., of Willmar, has been incorporated with a capital stock of \$600,000 and will manufacture farm machinery, engines, motor cars, etc.

Philadelphia, Pa.—The Pennsylvania railroad is about to go into the motor car manufacturing business. It is the intention of the company to make motor cars in the Juia shops in Altoona and to use them in its cab service in place of the old hansoms.

Providence, R. I.—The Snow Automobile Co. has been incorporated. C. D. Snow, who has had an agency under the name of the C. D. Snow Co., has formed a partnership with W. H. Draper and W. A. Rayner. An option has been secured on a plot of ground on Dorrance street, and it is probable the company will erect its



Springfield, Ill.—Nelson Wheel Co.; capital stock \$200,000.; to manufacture motors, vehicles and parts of the same. Incorporators, N. A. and E. A. Nelson and R. R. Longnecker.

New York.—Warren Auto Co.; capital stock, \$1,000. Incorporators, C. H. Simerson, H. C. Powers and W. E. Weinberg.

New York.—Baker Motor Vehicle Co.; capital stock, \$20,000; to manufacture motor cars and parts. Incorporators, N. Platt, G. H. Kelly and J. B. Laying.

New York.—West End Garage Co.; capital stock, \$2,000; to operate a garage. Incorporators, J. J. Doyle and W. P. Howe.

Buffalo, N. Y.—Empire State Tire Co.; capital stock, \$20,000; to build a factory in this city. The new company will engage in the manufacture of a patented puncture-proof tire, consisting of a layer of overlapping steel disks imbedded in rubber which are to be placed between the inner and outer tubes of the tire.

garage there. It will give up its old quarters on Broad street and will have temporary offices in the Banigan building.

Worcester, Mass.—B. A. Robertson, formerly manager of the Church Place garage, has filed a petition in bankruptcy.

Seattle, Wash.—Leash & Halbert have opened a garage in Hoquiam and will have the agency for the Cadillac car.

Fort Smith, Ark.—The Fort Smith Automobile & Supply Co. has removed to its new quarters on North Twelfth street.

Detroit, Mich.—A company to file articles of incorporation is the Eureka Tire Co. of Detroit, with a capital of \$20,000.

Springfield, Ill.—The Whelpley Rubber Co. has been incorporated with a capital stock of \$5,000 and will manufacture tires.

Cleveland, O.—The Bourne-Fuller Co. will erect a new machine shop and garage at Fifty-third street and Lakeside avenue.

Marysville, Cal.—Fred Roberts has bought out the Empire garage, recently run by W. B. Grow. He will have the establishment enlarged.

Newark, N. J.—Murray Connolly, formerly with the James Mills garage, has opened a bicycle and motor repairing shop in the rear of 140 West Main street.

Lansing, Mich.—R. C. Smith, formerly connected with the Pope Mfg. Co., has been appointed traveling representative for the Reo company.

Binghamton, N. Y.—The garage of S. H. Lewis & Co., at 47 Exchange street, was opened on August 19. The concern has the agency for the Pope-Waverley and the Maxwell.

Utica, N. Y.—F. P. Howes, who has been connected with the Buffalo branch of the Goodrich Rubber Co., has been transferred to Oakland, Cal., where he will be in charge of the adjustment department of the company's business.

San Mateo, Cal.—A new garage will shortly be erected here. The Pope estate has given a contract to F. H. Boring for the erection of a machine shop and garage at El Carmino Real and Third avenue. When the building is completed, which will be about December 1, it will be occupied by Andrew Smith, formerly of the firm of Shrewsbury & Smith.

Cleveland, O.—A new company to locate here is the French-American Motor Co., which recently filed articles of incorporation. M. B. White has been elected president, W. B. White vice president, J. J. Carroll secretary and treasurer, W. B. Brown general manager and G. R. Graham superintendent of the factory. The company has secured a building in East Fortieth street, and will manufacture a four-cylinder water-cooled car of 45 horsepower.